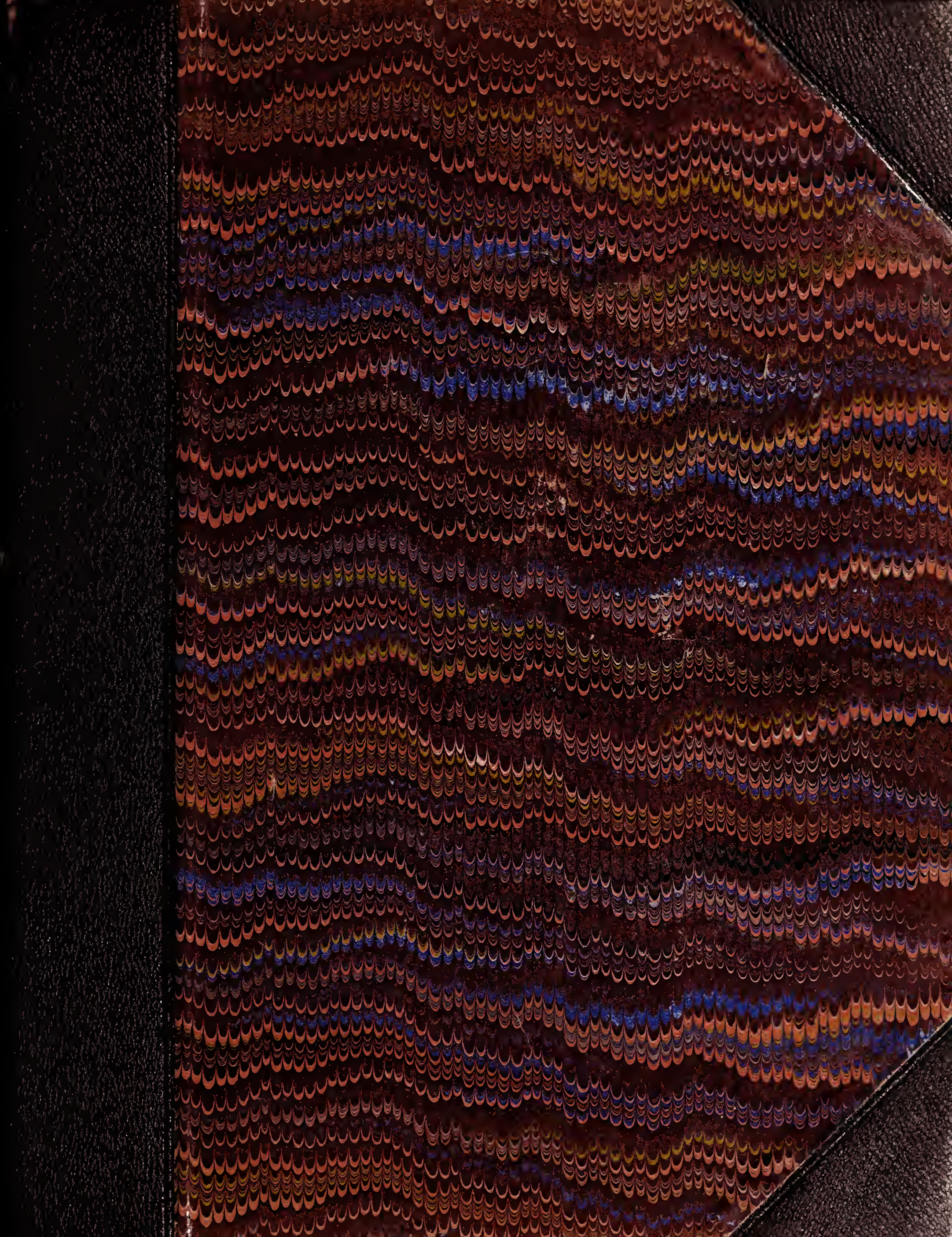

Report of the Ladies' Visiting Committee

Since my last report there have been few changes in the activities of the Ladies' Visiting Committee. In addition to our already organized sub-committees, we have added a House Committee. Mrs. John W. Farley is Chairman of this Committee and has written an excellent report with suggestions for many improvements. Some of these have already been made and others are under way.

During the year Mrs. Soule, Mrs. Erhard and Mrs. Sargent worked at the Infirmary one or two days a week as Gray Ladies, and Mrs. McCarthy and Mrs. Minot as Nurses' Aides. Mrs. Hunter, Mrs. Smithwick, Mrs. Hall and Mrs. Farley have helped on the Wards making beds, cleaning bed-side tables and helping with the linen.

We held our annual Rummage Sale last April with better results than we had hoped for, clearing a little over $2,000. Of this amount we put $1,000 into the John and Martha Lawrence Fund bringing that total to approximately $13,000 at the present time.

We gave our yearly $250 to the Occupational Therapy Department for supplies. It is with great regret that we have heard of the resignation of Mrs. Olsen who has done such splendid work.

We have entirely refurnished the sitting room on the fourth floor moving the old furniture into the Volunteers' Room. Mr. Hill wanted a new electrically cooled drinking fountain in the Admitting Office Waiting Room for which the Ladies' Visiting Committee gave $210. This has been so successful that we hope the Infirmary will put one on each floor.

Digitized by the Internet Archive
in 2018 with funding from
Boston Public Library

https://archive.org/details/massachusettseye1945mass

We gave fruit for Thanksgiving and for Christmas, Miss Robertson planned a party for all the employees of the Infirmary for which the Ladies' Visiting Committee furnished the ice cream, cake and candy. We bought and wrapped presents for all the patients who were in the Infirmary on Christmas day and gave a Christmas Tree for each Ward. Mrs. Kazanjian gave plants for all the Wards. Mrs. Curtis gave $50 to the Occupational Therapy Department with which they bought a much needed victrola for the Nursery.

We have given the usual papers and magazines for the Nurses' Home and have renewed window shades and lamp shades in the Home.

Our Rummage Sale is again planned for April and we sincerely hope that all those interested in the Infirmary will remember to save for us anything salable which they do not want.

Helen M. Sargent

Chairman, Ladies Visiting Committee

Report of the Director

TO THE MANAGERS:

Herewith is submitted the report for the year 1945 and my eleventh report as Director.

Three days before the Annual Meeting which came on February 14, 1945, Russell C. Fessenden, a Manager of the Infirmary since 1903 and President for the past sixteen years died suddenly. A resolution appended by the Managers to the President's report for 1944 which Mr. Fessenden had prepared, testifies to his accomplishments and expresses the appreciation and affection in which he was held.

Mr. Henry Hixon Meyer was chosen President and has applied himself diligently to the difficult task of solving the many serious and pressing problems that confront the Infirmary. First there is a sizeable operating deficit to be overcome. Next, as has been stated many times, the present building is in need of changes to improve operating rooms, utility rooms, kitchens and above all to provide additional accomodations for private patients. It is embarrassing but true, that the Staff must care for the majority of their private patients in other hospitals instead of at the Infirmary, which supposedly should offer the best possible place for the care of patients with eye, ear, nose and throat diseases. This situation must be remedied.

Happily it can be stated that this condition is being energetically studied; that various plans have been submitted for consideration and that Managers and Staff are enthusiastic in their determination to provide ways and means for accomplishing these needed and long deferred improvements.

An important step towards improving administrative organisation was the appointment on May 1st of Mr. Francis S. Hill as Assistant Director. The rapidity with which Mr. Hill assimulated his multitudinous duties and the good nature with which he attacked each problem, soon won the respect of all. It was a wise move and a happy solution.

In addition to this good fortune, the Ladies' Visiting Committee, which has always been a tower of strength to the Infirmary, under the leadership of Mrs. John W. Farley as Chairman of the House Committee, stimulated the Director, Assistant Director and Managers into remodelling the Men's Wards on the 3rd Floor, (Wards R,O,L,N). The old wooden floors were replaced by a cement base and an asphalt tile floor; a Nurse's Station and a treatment room built in the middle making two separate wards but each equally under the supervision of the Head Nurse and the entire floor repainted. The result is gratifying.

Additional improvements have been accomplished in the Kitchen and will be soon achieved in the Utility Room, now that long awaited but necessary utensil equipment has arrived.

The success of these changes has encouraged all to look forward enthusiastically towards more extensive remodelling. New operating rooms, a new wing with more private accomodations and expanded laboratory facilities and an auditorium.

## Statistics and Finances

The total number of patients treated was greater by 176 than last year, the increase being entirely in the private wards. The total patient days however was 273 less.

The number of new patients in the Out-Patient Department was 980 less and revisits 1,683 less. Nevertheless there was a daily average of 226 patients, a goodly number.

During the last 10 years salaries have increased from $218,567 to $344,777, or $126,210; supplies from $188,279 to $213,873 or $25,594, making total expenses rise from $406,846 to $558,651 or $151,805. For the same period income increased from $315,784 to $408,831, or $93,047. The hospital deficit in 1935 was $95,747; in 1945 $168,915, an increase of $73,168.

During this 10 year period there has been no increase in beds, but there has been considerable expansion in laboratory activities. A little over $19,000 was spent this year on the remodelling of the Wards. A large part of the salary increase was necessary to allow employees to meet the increased cost of living and in many instances to bring wages to a level more consistent with those paid for similar services outside the hospital. Even so, our standard of wages is below that paid in industry. This is compensated in part by reason of coninuity of employment, free medical and hospital care, vacation and sick leave with pay. Even so, we shall probably have to face additional salary increases.

## Changes in Staff

### Deaths

Dr. William I. Wiggin - Consulting Surgeon in Oto-Laryngology, Jan. 3, 1945
Appointed Clinical Assistant in 1916

Dr. Charles D. Knowlton - Consulting Surgeon in Oto-Laryngology, Jan. 5, 1945
Appointed Aural Clinical Assistant in 1923.

Mr. Russell G. Fessenden - President Board of Managers since 1928, Feb. 11, 1945
Member Board of Managers since 1903.

Dr. Ruth P. Guilder - Research Fellow in Otology, Feb. 12, 1945
Appointed Jan. 18, 1943.

Dr. Charles T. Porter - Surgeon in Oto-Laryngology, April 19, 1945.
Appointed Clinical Assistant 1916.

Mr. Henry Knoop - Elevator Operator, Aug. 20, 1945.
Employed since 1925.

Mr. John Blood - Maintenance man, Nov. 29, 1945.
Employed since 1912. John was known and beloved by all. No task was too hard, no hour too late for him to respond, pleasantly and efficiently.

Resignations

Dr. John G. Jennings - Associate Surgeon in Ophthalmology, Feb. 28, 1945.
Appointed Clinical Assistant 1917
Mr. Leverett Saltonstall - Member of Board of Managers, June 10, 1945.
Appointed 1925
Mr. Frank G. Allen - Member of Board of Managers, Dec. 12, 1945.
Appointed 1934.

Appointments

Dr. Harry E. Braconier - Senior Clinical Assistant in Ophthalmology, Apr. 16, 1945
Mr. Francis S. Hill - Assistant Director, May 1, 1945
Dr. Robert L. Goodale - Surgeon in Oto-Laryngology, June 10, 1945
Dr. Albert N. Lemoine,Jr. - Research and Teaching Fellow in Ophthalmology.
Nov. 1, 1945; Clinical Assistant in Ophthalmology, Dec. 17, 1945
Mrs. Sullivan A. Sargent - Manager, June 10, 1945.
Dr. Rudolph E. Swenson - Clinical Assistant in Oto-Laryngology Oct. 15, 1945.
Dr. Charles Kent - Clinical Assistant in Oto-Laryngology, Oct. 15, 1945.
Dr. Edward F. Lawlor - Clinical Assistant in Oto-Laryngology Nov. 19, 1945.
Mr. Edmund V. Keville - Manager Dec. 12, 1945.
Dr. John G. Jennings - Consulting Surgeon in Ophthalmology 1945.
Dr. Fred S. Thorne - Surgeon in Ophthalmology Dec. 12, 1945.
Dr. Trygve Gundersen - Surgeon in Ophthalmology Dec. 12, 1945.
Dr. Merrill J. King - Associate Surgeon in Ophthalmology Dec. 12, 1945.
Dr. David G. Cogan - Associate Surgeon in Ophthalmology Dec. 12, 1945.
Dr. S. Forrest Martin - Assistant Surgeon in Ophthalmology Dec. 12, 1945.
Dr. Garrett L. Sullivan - Assistant Surgeon in Ophthalmology Dec. 12, 1945.

During the war years residencies were reduced to 6 on each Service. These have now been increased to 11 on each Service, 8 being the regular number and the three being added to provide training for veterans whose resident service was interrupted through entering military service. Both Services are flooded with applications and this small increase, although taxing our resources, will accomodate only a small part of those deserving the special training offered by the Infirmary. War is cruel in many ways. The extra men are housed in a wing of the Nurses' Dormitory.

V-E Day came on May 7th; V-J Day on August 14th. The war was over. Now we could look forward to the return of missing staff,

nurses and employees. This hope has been partially realized for the Staff, but nurses and employees are as scarce as ever. Perhaps when terminal leaves are over they will return. We hope so, for we need them badly.

The following staff members have returned to duty.

Eye Service

Edwin B. Dunphy, M. D.
Trygve Gundersen, M. D.
S. Forrest Martin, M. D.
Garrett L. Sullivan, M. D.
Thomas Cavanaugh, M. D.
Lawrence Dame, M. D.
William F. Donoghue, M. D.
Sumner D. Liebman, M. D.
Arthur M. Morrissey, M. D.
Earl S. Seale, M. D.
H. Frederick Stephens, M. D.

Ear, Nose and Throat Service

Charles I. Johnson M. D.
Charles H. Allman, M. D.
John R. Frazee, M. D.
Joshua C. Drooker, M. D.
Frank Gavolio, M. D.
Joseph Lentine, M. D.
Herman J. Sternstein, M. D.

Gifts

Gifts are acknowledged from: The Ladies' Visiting Committee, Mrs. Richard Cary Curtis, Dr. Edgar M. Holmes, Dr. Samuel Cline, Mrs. Dwight, Mr. Charles P. Curtis, Dr. Theodore L. Terry, Dr. and Mrs. V. H. Kazanjian, Mrs. Ruiz and the Metropolitan Chapter of the American Red Cross.

Our Needs

1. For the last 4 years the Director has set forth the need of the Infirmary to remodel the present building, add a new wing and to provide "up-to-date operating rooms, more private rooms, increased laboratory space and a teaching amphitheatre." This need increases with each passing year. Let us hope that it will be met before another year passes.

2. Increased endowment, the income to be used to defray operating expenses. Your Director first mentioned this in 1937 and has repeated it each year. "Blindness and deafness are calamities which effect both the individual and the community. They lessen or eliminate the self-supporting powers of the individual and thus in many instances place the burden of support upon the community. The Massachusetts Eye and Ear Infirmary is the outstanding institution in New England where diagnosis and treatment for these crippling conditions can be carried out and where research for preventive or curative measures can be most hopefully supported."

3. Research. Clinical research, which is the study of the causes, amelioration and cure of disease, carried out by observation and practice upon patients has been an activity of the Staff of the Infirmary since its foundation. The establishment of the Pathological Laboratory, Howe Laboratory of Ophthalmology and the Mosher Laboratory of Oto-Laryngology provided facilities for the pursuit of research in additional ways. Research is now recognized and accepted along with care of patients and teaching, as one of the essentials of a good hospital. Research is time consuming for the doctor and often requires expensive apparatus. Individuals and Foundations have been generous in their support, but each discovery, each advance beneficial as it may be to the individual sufferer, seems only to point the way toward new worlds to be conquered. To this end, either annual funds or endowments that will provide a satisfactory income for the support of research over extending years is needed. No sum is too small or too large but what it can be used to advantage to further this fundamental method of advancing medical science.

The measure of an institution is not only what it does to alleviate suffering and cure sick persons, but also what it contributes to further medical program.

Nathaniel W. Faxon, M. D.
Director

STATISTICS

January 1, 1945 to January 1, 1946

| Number of Patients: | In Ward Jan. 1, 1945 | Admitted | Treated | Remaining Dec. 31, 1945 |
|---|---|---|---|---|
| Public Wards: | | | | |
| Eye . . . . . | 46 | 1,930 | 1,976 | 50 |
| Ear . . . . . | 17 | 399 | 416 | 7 |
| Nose and Throat . | 19 | 1,702 | 1,721 | 15 |
| Total . . . . | 82 | 4,031 | 4,113 | 72 |
| Private Ward: | | | | |
| Eye . . . . . | 23 | 1,033 | 1,056 | 28 |
| Ear . . . . . | 3 | 113 | 116 | 1 |
| Nose and Throat . | 3 | 1,024 | 1,027 | 9 |
| Total . . . . | 29 | 2,170 | 2,199 | 38 |
| Total Public and Private Wards 1945. . . | 111 | 6,201 | 6,312 | 110 |
| Total Public and Private Wards 1944. . . | 86 | 6,050 | 6,136 | 111 |

| | 1945 | 1944 |
|---|---|---|
| *Number of days board furnished free Public Wards . . . | 5,152 | 5,834 |
| *Number of days board paid at full rate Public Wards. . | 29,737 | 30,180 |
| | 34,889 | 36,014 |
| Number of days board paid in Private Ward . . . . . | 13,449 | 12,597 |
| Total number of patients' days . . . . . | 48,338 | 48,611 |
| Average number of patients treated daily in Public Wards | 96 | 98 |
| Average number of patients treated daily in Private Wards | 37 | 34 |
| Average number of total patients treated daily. . . . . | 133 | 132 |
| Average number of days patients remained in Public Wards | 8+ | 8+ |
| Average number of days patients remained in Private Wards | 6+ | 6+ |

*The number of days board paid at full rates is obtained by dividing the total amount of cash received from Public Ward patients, after sundry minor adjustments by the prevailing rate-$4 a day. The rest of the number of days are reduced as free.

OPERATIONS

| | 1945 | 1944 |
|---|---|---|
| Public Ward: | | |
| Eye . . . . . | 1,968 | 2,180 |
| Ear, Nose and Throat. . . . . | 2,124 | 2,140 |
| Private Ward: | | |
| Eye . . . . . | 842 | 686 |
| Ear, Nose and Throat. . . . . | 779 | 725 |
| Total. . . . . | 5,713 | 5,759 |

Per Capital Costs and Earnings per Day

| | 1945 | 1944 |
|---|---|---|
| Costs: | | |
| Not including special nurses, Public Wards. | $8.05 | $8.18 |
| Not including special nurses, Private Ward. | 7.35 | 6.83 |
| Not including special nurses, Public and Private Wards . . . . . | 7.85 | 7.83 |
| Of food all persons . . . . . | .46 | .50 |
| Earnings: | | |
| Not including special nurses, Public Wards. | 4.88 | 5.22 |
| Not including special nurses, Private Ward. | 7.52 | 7.91 |
| Not including special nurses, Public and Private Wards . . . . . | 5.61 | 5.92 |
| On special fees, Public Wards (excluding board and special nurses). . . . . | 1.75 | 1.76 |
| On special fees, Private Ward (excluding board and special nurses). . . . . | 2.12 | 2.43 |

Public Ward patients were admitted at the following weekly rates: 8 @ $42.00; 28 @ $35.00;111 @ $33.25; 47 @ $31.50; 3,393 @ $28.00; 2 @ $21.00; 3 @ $20.00; 3 at $15.00; 62 at $14.00; 1 at $12.00; 4 at $10.50; 97 at less than $10.50; 272 at Free.

Private Ward patients were admitted at the following weekly rates: 4 at $63.00; 3 at $56.00; 635 at $52.50; 5 at $45.50; 61 at $38.50; 106 at $35.00; 1,356 at $31.50.

Condition of Public Ward Patients on Discharge

| | 1945 | 1944 |
|---|---|---|
| Untreated . . . . . | 0 | 0 |
| Against advice. . . . . | 9 | 10 |
| Died. . . . . | 10 | 21 |
| Otherwise Discharged. . . . . | 4,026 | 4,027 |
| Autopsies . . . . . | 44% | 41% |

| Patients' Days Treatment (Reckoned from discharge payments): | 1945 | | 1944 | |
|---|---|---|---|---|
| Paying patients . . . . . | 72% | 25,773½ | 67% | 24,450½ |
| Part paying patients. . . . . | 13% | 4,736 | 17% | 6,059 |
| Free patients . . . . . | 15% | 5,365½ | 16% | 5,599½ |
| Total . . . . . | | 35,875 | | 36,109 |

| 1945 | Beds Available | % | 1944 | Beds Available | % |
|---|---|---|---|---|---|
| * Public Wards . . . . . | 138 | 65% | Public Wards . . . . . | 143 | 61% |
| ** Tonsil Ward . . . . . | 16 | 0% | Tonsil Ward . . . . . | 16 | 16% |
| *** Gardner Ward . . . . . | 26 | 22% | Gardner Ward . . . . . | 26 | 15% |
| Total Public . . . . . | 180 | | Total Public Wards . . | 185 | |
| Private Ward and Rooms. | 42 | | Private Ward and Rooms . | 42 | 80% |
| Total Beds . . . . . | 222 | | Total Beds . . . . . | 227 | |

OUT-PATIENT DEPARTMENT

| | New Patients | Subsequent Visits | Total Visits |
|---|---|---|---|
| Eye . . . . . | 5,422 | 33,648 | 39,070 |
| Ear . . . . . | 2,643 | 15,757 | 18,400 |
| Nose and Throat . . . . . | 1,724 | 8,738 | 10,462 |
| Total . . . . . | 9,789 | 58,143 | 67,932 |

| | 1945 | 1944 |
|---|---|---|
| Daily average . . . . . | 226 | 234 |
| Patients treated in Emergency Ward . . | 4,662 | 4,715 |
| Percentage of free visits reckoned from total number of free visits Massachusetts General Hospital and Massachusetts Eye and Ear Infirmary combined Out-Patient Department | 20% | 20% |

* For a period of two months 28 beds in the Wards were unavailable due to reconstruction.

** The Tonsil Ward was closed during 1945 because of the lack of nurses.

***Gardner Ward with accomodations for 9 adults, 5 children and 12 infants, is an Isolated Ward. While it is necessary to have facilities ready for patients with infectious diseases, the actual occupancy of these beds and cribs during the last 10 years has been very low.

## OPERATIONS

| | Local Anesthesia | General Anesthesia | Total |
|---|---|---|---|
| Eye . . . . . | 596 | 54 | 650 |
| Ear . . . . . | 4 | 210 | 214 |
| Nose and Throat . . . . . | 594 | -- | 594 |
| Total . . . . . | 1,194 | 264 | 1,458 |

## COMPARATIVE TABLE OF ADMISSIONS

| | Number of Patients Admitted to Wards | Total Patients' Days Treatment | Operations | Out-Patient Department Visits |
|---|---|---|---|---|
| 1936 | 7,366 | 54,639 | 7,164 | 96,784 |
| 1937 | 7,316 | 53,855 | 7,233 | 101,403 |
| 1938 | 7,332 | 53,547 | 7,378 | 100,465 |
| 1939 | 7,376 | 53,908 | 7,244 | 100,861 |
| 1940 | 7,042 | 52,685 | 6,738 | 96,350 |
| 1941 | 6,702 | 50,769 | 6,450 | 89,678 |
| 1942 | 6,436 | 48,438 | 6,183 | 84,370 |
| 1943 | 6,015 | 48,120 | 5,662 | 72,370 |
| 1944 | 6,050 | 48,611 | 5,759 | 70,595 |
| 1945 | 6,201 | 48,338 | 5,713 | 67,932 |

## INVENTORIES

| | 1946 | 1945 |
|---|---|---|
| Total Inventories for year . . . . . | $15,984.70 | $17,428.08 |

REPORT OF THE DEPARTMENT
OF OPHTHALMOLOGY

The task of returning from the Armed Forces to resume the position as head of the Department of Ophthalmology is a rather confusing one. Many changes have taken place and many problems present themselves. The fact that the Infirmary has continued to give excellent care to the sick is due in no small measure to the quality of leadership shown by Dr. Paul A. Chandler in holding together the department during the trying war years. Much credit is due him and the other members of the Staff for co-operating so loyally during this difficult time.

It is a pleasure to announce that a number of our men have returned from the Army and the Navy and are now back at work at the Infirmary. The following is a list of the Ophthalmological Staff members who have served in the Armed Forces with their final military or naval rank attained before separation. Not every one on the list has been released, but it is hope that all will be on duty here very soon.

Edwin B. Dunphy, Capt. (MC) USNR
Virgil G. Casten, Capt. (MC) USNR
S. Forrest Martin, Commander (MC) USNR
H. Frederick Stephens, Commander (MC) USNR
Trygve Gundersen, Lt. Colonel (MC) AUS
Garrett L. Sullivan, Lt. Colonel (MC) AUS
Thomas Cavanaugh, Lt. Colonel (MC) AUS
Lawrence R. Dame, Lt. Colonel, (MC) AUS
Earl S. Seale, Major (MC) AUS
Sumner D. Liebman, Captain (MC) AUS
Arthur M. Morrissey, Captain (MC) AUS
Linus A. Sheehan, Captain (MC) AUS
William F. Donoghue, 1st Lieutenant (MC) AUS
Daniel J. Reagan, Captain (MC) AUS

The Perimetry Room is once more in charge of Dr. Sullivan three mornings a week. His presence there will greatly strengthen the instruction to house officers in this important phase of ophthalmology. Dr. Sullivan also plans to work closely with Dr. Kazanjian in the handling

of eye plastic operations.

Dr. Richard Pippitt has been appointed to a fellowship in pathology for one year under Dr. Terry. Following this he will become a resident in ophthalmology at the Infirmary, and later, it is hoped he will remain to help Dr. Terry in the Pathology Laboratory.

With the appointment of one of our recent graduates, Dr. Albert N. Lemoine, Jr., as special teaching fellow for one year, an experiment is begun for which we have high hopes. Dr. Lemoine devotes his time about equally between the Howe Laboratory and the Infirmary. Part of his responsibility to the latter is to assist in the training of the externs, collect interesting fundus cases for a House Officers' meeting each week, and to work up all cases to be presented to the regular weekly Clinical Staff Conference. He is also making a survey of all glaucoma cases at the Infirmary which should prove a very valuable piece of work.

The Refraction Room under the direction of Dr. Sloane, continues to be a busy place. During 1945 10,046 patients were refracted. A more detailed report by Dr. Sloane is given elsewhere.

During the year 39,070 visits were made to the Eye Clinic in the Out-Patient Department, not as many as in pre-war days, but sufficient to keep our depleted Staff hard at work. We deeply regret that Miss Barbara Harris, Head Nurse in this Clinic for the past few years, has resigned to accept an appointment at the New York Eye and Ear Infirmary. Her position has been taken over by Miss Mary Malone.

Another loss which will be genuinely felt is that of Miss Alice C. Scott, our orthoptic technician, who resigned in September. Miss Scott came to us in 1943 to establish an orthoptic department, an entirely new venture at the Infirmary. In two years she built it up to be a very busy and important unit of the Out-Patient Department. During 1945 1,890 visits were made to this Clinic. Many of these patients were given orthoptic exercises before or after squint surgery. It is the consensus of opinion of all the Staff that the handling of the squint problem has been greatly improved by these measures.

Negotiations for her successor are underway.

The Aniseikonic Clinic under the direction of Dr. Mahlon T. Easton, has now completed its fourth year of operation. The number of new patients examined in 1945 was 31, slightly more than last year. Only a slight proportion of this number were given aniseikonic lenses.

The Bacteriology Department, originally made available to us through the courtesy of Dr. Schall, continues to be very helpful to the Ophthalmological Service. Under the able direction of Miss Mangiaracine it gives us first hand knowledge of the bacteriology of the eye by means of the most modern techniques.

Like all similar institutions the Massachusetts Eye and Ear Infirmary is besieged with applications for residency from returning Army and Navy medical officers. Recognizing one of the functions of the hospital as a training centre for specialists, the Board of Managers has authorized three extra residents on both the Eye and the Ear, Nose and Throat Services for 1946. In addition to this, the Neuro-Ophthalmological Service, discontinued during the war, is now re-established. This means we will have a total of 11 Eye Residents instead of the 7 carried last year. All this brings up many problems in housing and training these extra house officers. However, we accept these problems gladly since we feel a definite responsibility in bearing our share of this nation-wide medical reconversion program.

Edwin B. Dunphy, M.D.
Chief of Ophthalmology

Report of the Department of Oto-Laryngology

The activities of the Department of Oto-Laryngology have during the greater part of the past year followed in the pattern of the preceding war years. The problems that had to be solved also were much the same, with the exception of the problem of residents, which was solved by lengthening the term of service from one to two years. The shortage of personnel, both medical and non-medical, was met by the loyal cooperation, by the long hours and harder work of those who were available.

The Infirmary suffered through death. Mr. Russell G. Fessenden, President of the Board of Managers for the past sixteen years, died on February 11, 1945.

Dr. Ruth P. Guilder, in charge of the research in deafness, died on February 12, 1945. In the all too few years that Dr. Guilder had been with us her work in deafness, and particularly her work with young children has been outstanding and has attracted nation-wide approval. Her intense enthusiasm, her profound knowledge, her interest and devotion to the problems of the deaf, leave a void that we can never fill.

Dr. Charles T. Porter, a resident of the Ophthalmological Service in 1914 and of the Aural Service in 1915, serving through the various grades on the Oto-Laryngological Staff, for the past ten years a Senior Surgeon, died April 19, 1945. Dr. Porter's loyalty, sound judgment, and surgical ability have been a serious loss to medicine.

The Infirmary has lost also through resignations.

Dr. Edwards W. Herman, surgeon assigned to the Tumor Clinic, resigned soon after V. J. Day. Dr. Herman, although past the retiring age, throughout the war years faithfully carried on the work of the Tumor Clinic. His long work with cancer and his sound judgment was a steadying influence that we will sorely miss.

Dr. Lyman G. Richards, a graduate of the Otolaryngological Service in 1924, and Surgeon in charge of the Bronchoscopic Service since 1943, Dr. Richards has resigned to accept a place on the staff of the National Hospital for Speech Disorders in New York.

With the cessation of hostilities, and with the separation of medical personnel from the military services, the problem of finding residents was relieved. Our problem now is to do as much as we can for as many as we can of those desiring training in Oto-Laryngology. With the approval of the Board Of Managers, the number of residents was increased from six to eleven. The service was reorganized so that each resident has a senior service of six months in laryngology and six months in otology. Plastic Surgery, the Tumor Clinic and the Allergy Clinic will be included in the training. We have arranged with Dr. Mallory to give each resident three months in Pathology, with special emphasis on Oto-Laryngic Pathology. With the emphasis placed on the basic sciences by the Specialty Boards, the Infirmary in conjunction with the Department of Oto-Laryngology of the Harvard Medical School, plans an eight months course in the basic sciences.

The weekly Wednesday clinical conferences continue as a forum for discussion are a stimulus to the entire staff. They attract such an audience that frequently there is standing room only. The Infirmary needs an auditorium for such meetings.

The Bacteriological Laboratory has proved itself as one of our most valued assets. The scientific identification of the infecting organism is necessary for the selection of the proper chemotherapeutic agent to combat that organism. The recent advances in chemotherapy and in bacteriostatic agents make proper identification imperative. Blood chemistry to insure sufficient dosage, sensitivity or resistance of the organism to the agent and many other chemical investigations are now done by Miss Mangiaracine and her co-workers.

The X-ray Department under Dr. MacMillan still continue to be the envy of other Oto-Laryngologic hospitals. The proper taking of negatives and the proper reading of those plates only comes from the long experience that Dr. MacMillan has had and from the opportunity to check the reading by observing in the operating

room the actual pathology found. Our experience with our X-ray Department and with the Bacteriological Laboratory strengthens our belief that a special hospital dealing with special problems should develop its own special laboratories and not have to depend on general laboratories that do not have a special interest in the special problem.

The study of deafness under the Winthrop Fund, and the socialological and rehabilitation problems of deafness under the Rantoul and Jackson Funds, have since Dr. Guilder's death been handled by Dr. Donald K. Lewis. We have been handicapped by the lack of space and by the lack of beds. Both Dr. Joseph C. Aub and Dr. Fuller Albright are intensely interested in this problem and when sufficient personnel return they are anxious to carry on studies that might throw some light on deafness.

The special radium applicator as designed by Crowe for use in lymphoid hyperplasia of the nasopharynx has been ordered almost a year and we expect it in the near future.

The fenestration investigation has been in the able hands of Dr. Philip E. Meltzer. His unselfish devotion, hard work, enthusiasm and strictly unbiased scientific attitude towards this problem is an example that others could follow. The Infirmary is indeed fortunate to have this investigation in so capable hands.

In addition to his many other duties Dr. Daniel Miller has been assigned to the Tumor Clinic. Here, with Dr. Ernlund as Surgeon in Chief, close cooperation with the other services in the care of the cancer patient is maintained.

During the war years the Plastic Service was deprived of a resident. Only when and if his duties permitted, the senior throat resident could help out on the Plastic Service. Both Dr. Kazanjian and Dr. Holmes carried on nobly under this handicap. Under the new reorganization, plastic service will be one of the duties of the First Throat Senior.

The class for laryngectomized patients in the development of the so-called esophageal voice is now under the direction of Mrs. Mary E. Doehler. A school teacher by profession, Mrs. Doehler is again back teaching school after losing her larynx; and now holds classes at the Infirmary every Saturday morning. She is an inspiration to all her students as she is a perfect sample of determination surmounting handicaps.

Lack of private rooms and lack of facilities still are a problem. To fulfill our heritage we need more beds and more working space. We should have a service devoted to otosclerosis with a separate staff and a full time resident. The cancer cases should perhaps be segregated and not be assigned beds in the public wards. The children for tonsillectomy should be individualized and not treated as a group. Our residents need more instruction in the Out-Patient Department and more of the art of medicine.

Our Staff has continued to be in demand in presenting papers before scientific organizations, both local and national.

With the cessation of hostilities and with the return of our staff we look forward, with confidence, to the continuation of the high standard of the various activities of the Eye and Ear Infirmary in 1946.

Leroy A. Schall M.D.
Chief of Otology and Laryngology.

# ANNUAL REPORT-VISION ROOM--1945

| | | |
|---|---|---|
| Patients refracted | 10,046 | |
| Patients refracted by House Officers | 3,841 | or (38.3%) |
| Patients refracted by paid Personnel | 6,205 | or (61.7%) |

PERSONNEL:

The personnel included at this time nine (9) paid members-7 of which are employed part time and two full time, and the entire House Officer Staff.

Part time:
a. A.E.Sloane M.D.
b. J.C.Chisholm M.D.
c. C.Wood
d. W.Emmons
e. F.Brucker
f. J.Gaidis
g. A.Levine

Full time:
T. Farmer
R. Prag (Secretary)

During the past year Miss Watson, our secretary, left to work with the British War Relief Agency.

EQUIPMENT:

The American Optical Company kindly set up a complete modern refracting unit for the use of the vision room staff. It includes:

A hydraulic ophthalmic chair and unit;
Ophthalmometer;
Phoropter;
Giant ophthalmoscope;
Electric retiniscope;
Projector-chart;

TEACHING:

The Friday afternoon "Teaching Refraction Clinic" was carried out on a somewhat modified manner. Due to the non-availability of a stenographer to record the meetings as previously done, and at the request of the House Officers, these sessions were for the most part conducted as regular lectures in various phases of refraction.

House Officers trained in refraction were: McLaughlin, Irvine, West, Floyd, and Mills. Some of these men had had adequate preliminary training before coming here.

PROGRAM for 1946:

It is hoped that with the return of normal conditions we can again resume further study in problems of refraction and muscles.

ACKNOWLEDGEMENT:

The submittor wishes to express his appreciation for the fullest cooperation given him by all.

A.E.Sloane M. D.

## REPORT OF THE PATHOLOGICAL LABORATORY

The number of pathological specimens sent to the laboratory were 353, an increase of 90 cases over 1944. Of these specimens, 85 were sectioned at the Pathology Laboratory at the Massachusetts General Hospital in order to take advantage of its rapid paraffin method. Among the total were 56 specimens of malignant tumors, of which 20 were malignant melanomata and 5 were retinoblastomata.

Specimens of unusual interest were two Parinaud's conjunctivitis, one Coat's disease, one exanthelasma, and four retrolental fibroplasia. The eyes from a child who died following clinical signs of toxoplasmosis have merited special investigation.

The three specimens showing the earliest stages of German measles cataract are worthy of mention. They represent embryo eyes, two from the Boston Lying-In Hospital and one from the University of California Hospital. Although no cataract has formed at this stage, there is a retardation in growth and development of the crystalline lens.

Certain of the fundamental studies of the specimens have been carried out by Dr. Julian Chisholm. Because of limited space in the pathological laboratory, Dr. LeRoy A. Schall has allowed this work to be done in the Mosher Laboratory.

Curtailment of instruction in the laboratory has continued, as a war-time necessity. Various staff members have borrowed microscopic slides, however, for demonstrations and exercises. Many house officers have shown renewed interest in the study of gross specimens.

George B. Corcoran, M. D., volunteer worker in the department during the summer, attempted to produce abnormalities in embryos by giving graded doses of various types of poisons to the gravid rats during the early stages of pregnancy. This problem, stimulated by the occurrence

of German measles cataract, retrolental fibroplasia and other less common evidences of "maternal impressions," was well conceived and well conducted. In the course of the study, certain negative results appeared. Their verification, in the light of newly discovered factors, will require repetition.

Retrolental fibroplasia remains the major research activity of the laboratory. The study demands a comprehensive inquiry into all aspects of the disease entity which means detailed laboratory study with clinical investigation. To limit the study to certain phases of the process would be to erect artificial barriers and perhaps to delay the solution of the problem.

The scope of this research has required the further use of the laboratory generously provided by Dr. S. Burt Wolbach at Harvard Medical School.

The research studies performed in the laboratories have been concentrated chiefly on three important phases. They are: first, the quantitative determination of vitamin A reduction in the mother rat necessary to produce abnormalities of the eyes in the young; second, determination of the time at which aqueous humor is first elaborated; and third, the raising of premature animals.

The reproduction of abnormalities in the development of rat eyes in relation to extreme vitamin A deficiency of the mother rat as first reported by Warkany has been successful, and the quantitative measurement of the degree of vitamin A deficiency necessary to produce this condition has been determined. Reconstructions have been made from serial sections of fetal rat eyes showing the Warkany phenomena. One shows graphically the coloboma of the choroid, which is a frequent finding, in association with the typical mesodermal hyperplasia in the vitreous

humor. The use of the micro-chemical technique and good fortune in obtaining a Beckman spectrophotometer, which permits accurate quantitative measurements of specimens as small as 1/20 cc. in volume, have facilitated efficient completion of this laboratory work.

On the other hand, further developments in the study of retrolental fibroplasia indicate strongly that this abnormal process develops in the infants despite adequate vitamin A blood levels. This contribution comes from Dr. Stewart Clifford through work done at the Boston Lying-In Hospital.

Turning from vitamin A research, it has been possible to measure in young rabbits the time at which the vitamin C level of the aqueous humor approaches fullest development. The laboratory obtained similar measurement in monkeys, through the cooperation of Dr. van Wagenen and Dr. Morris who furnished aqueous specimens at all desired stages from their colony of Macacca mulatta monkeys at Yale University. These studies are being performed on specimens of human eyes, as opportunities arise in conjunction with other procedures. The results of these studies give some indication that the vitamin C accumulation to normal levels tends to coincide with the time when the anterior chamber assumes characteristics of fullest development.

A few aqueous samples have been obtained from infants with retrolental fibroplasia. In each of them, the vitamin C level is low, paralleling that of aqueous humor before it arrives at full measure. This part of the research project aims to test whether a failure of complete aqueous humor formation is the cause of retrolental fibroplasia. Dr. V. Everett Kinsey and Dr. Blanche Jackson have provided valuable suggestions and plans for all phases of the study. Their interest is primarily in the biochemical research.

Since the study started, many attempts to produce retrolental fibroplasia in various species of laboratory animals have been unsuccessful. Among the children affected, the most striking common factor is extremely premature birth. To reproduce this extreme prematurity in laboratory animals has been an insurmountable task. Some progress was made in raising premature pigs, but lack of properly trained personnel and the difficulty of obtaining the exact stage of gestation in the animals at a reasonable cost made continuance unwise.

Unsuccessful attempts have been made to raise premature rabbits. Data is being collected, however, on the possibility of raising premature monkeys. It is hoped that persons interested in problems of prematurity as a whole may see fit to join the project and help support it.

Acknowledgment should be made of the helpful cooperation of others concerned in the problem. Mr. Leo Rainard, biochemist in the field of proteins at the Institute of Textile Technology in Charlottesville, Virginia, is formulating a research program related to retrolental fibroplasia for his own study after a survey of the work which is being done here.

Common grounds for study of the relation between retrolental fibroplasia and growth and development of infants have been established with Dr. Harold C. Stuart of the Harvard School of Public Health. We have been able to share a chemical technician in our correlative study of vitamin A blood levels. The cooperation of the Boston Lying-In Hospital and the Children's Hospital has facilitated many of the studies.

The pathologic specimens for microscopic study arising from the research activities have been numerous. In addition to the routine work of the laboratory, there have been 162 specimens cut and prepared for study relating directly to the research. Many of the sections are cut serially.

Expansion of the study has necessitated the addition of a secretary, a technician, and a research assistant to the staff. In spite of the increased personnel, it has been necessary to have some of the research section work done at the Massachusetts General Hospital laboratory by the research technician, and others prepared at the laboratory of Professor S. Burt Wolbach at the Harvard Medical School.

The concentration on the study of retrolental fibroplasia necessitates postponement of many interesting and perhaps important observations; for example, production of the retina with rods and cones projecting toward the vitreous and the ganglion cell layer projecting toward the undeveloped choroid, the development of orbital cysts and development of a hypertrophied and deformed cornea.

The details of clinical studies have developed considerably. A minimum of three hours a week is devoted to the periodic examination of the children. A new record system registers the details of examination on a quantitative basis. Miniature photographs of the children give a record of head and eye development. The number of cases under close follow-up has doubled in the past year, bringing the total to 100.

The clinical research study shows what changes occur in these eyes with the passage of time. In most instances, there is a definitely observable reduction in the amount of retrolental fibroplasia tissue but

usually the eyes fail to grow as if aqueous humor were not longer elaborated in normal amounts. Although no effective curative treatment has been developed, both medical and surgical aids have been devised to prevent and to eradicate the various complications that occur. These, in some instances, prevent total destruction of the eyes and preserve in other cases a small amount of vision.

However objective one may be at the beginning of work with these infants, the social problem involved shows its true importance through the continuance of the work. This periodic examination system is proving to be of tremendous psychologic value for the parents. It gives them opportunity to meet other parents with similar troubles and exchange ideas on various problems of training. The parents' problem seems insuperable to them, and a meeting with others opens ways to help adjust themselves to the essential problem of giving their children a real opportunity for a full life.

From the need for more adequate help in training and educating these children in conjunction with the Social Service Department, it was evident that this problem presented a unique need for aid not hither-to realized. There is no organization in existence to solve the difficulty.

One important natural outgrowth was the unprecedented summer school course at Perkins Institution for the Blind for a group of these pre-school children and their mothers. This proved successful beyond our estimation. Such work showed that some of these infants who were erroneously considered by experts to be definitely mentally retarded had normal mental processes but their consciousness had previously never been properly reached. Their habits and training were greatly retarded in relation to their age.

Through observation of the skillful work of the Social Service Department, it was evident that the greatest practical aid to the parents and children is the establishment of a rational view of their problem, thus allaying many needless fears for fathers and mothers. The absolute necessity for a full-time social service worker for this program was soon recognized.

Too high praise cannot be given to Mrs. Wilson and Miss Butler of the Social Service Department for what they are doing not only for the mothers and children we contact but in establishing new methods of approach in this frontier of activity that is already beginning to have far-reaching value. Patients whose vision is as relatively hopeless as these infants need treatment and supervision far beyond that of a physician. To see the miracles that are wrought in some of these families is not a newspaper type of "sob-sister" story but an actual occurrence that should be known to every friend of the Massachusetts Eye and Ear Infirmary.

T. L. Terry M.D.
Pathologist

# REPORT OF THE X-RAY DEPARTMENT

The decrease in the number of patients this year, some three hundred can be accounted for by the fewer examinations for mastoid disease. There is a further decrease in the number of patients referred for question of intraocular foreign bodies.

The department is handicapped by the lack of our regular third technician. It means more night and Sunday work for the two that are on duty. The entire department appreciates the cooperation of everyone.

Tabulation of cases is as follows:

| | |
|---|---|
| Thymus | 717 |
| Mastoids | 1096 |
| Sinuses | 2053 |
| Teeth | 226 |
| ? Foreign Body eye | 118 |
| Chest | 894 |
| Esophagus | 196 |
| Skull | 114 |
| Jaws | 53 |
| Nose | 90 |
| Treatments | 253 |
| Lipiodol Injections | 21 |
| Lateral Neck | 286 |
| Miscellaneous | 171 |
| Petrous | 25 |
| Long Bones | 18 |
| Abdomen | 20 |
| Optic canals | 9 |
| Number of examinations | 6360 |
| Number of patients | 5734 |

Bouginage

| | |
|---|---|
| Number of treatments | 456 |
| Number of patients | 84 |

| | |
|---|---|
| Total number of examinations for year | 6816 |
| Total number of patients for year | 5818 |

A.S.Macmillan, M.D.
Roentgenologist

Report of the Nursing Department

1945

| Authorized Personnel | | |
|---|---|---|
| 1 | Assistant Superintendent of Nurses | 1 |
| 1 | Supervisor | 1 |
| 1 | Instructor | 1 |
| 1 | Night Supervisor | 1 |
| 1 | Assistant Night Supervisor | 1 |
| 1 | Operating Room Supervisor | 1 |
| 5 | Operating Room Head Nurses | 5 |
| 1 | Chief Anesthetist | 1 |
| 4 | Assistant Nurse Anesthetists | 2 |
| 6 | Ward Head Nurses | 5 |
| 5 | Assistant Ward Head Nurses | 4 |
| 3 | Clinic Head Nurses (Out-Patient) | 3 |
| 21 | General Duty Graduates (Days-Evenings-Nights) | 16 |
| 21 | Attendants | 5 |
| 16 | Orderlies | 13 + 1Part Time |
| | | 60 + 1Part Time |

Student Personnel

| | | |
|---|---|---|
| 4 | Post Graduate Nurses | 2 |
| 18 | Affiliating Student Nurses | 14 |
| 0 | M.G.H. Students for Pediatric Experience | 3 |
| 0 | M.G.H. Students for Operating Room Experience | 1 |
| 22 | | 20 |

Total .....110 Total ..... 80 + 1 Part Time

The year 1945 has been the most difficult year experienced by the present staff of the Nursing Department. The census of December 31, 1945, showed the shortage of workers to be 30: 16 attendants, 5 staff nurses, 3 orderlies, 2 anesthetists, 2 post-graduate students, 1 head nurse and 1 assistant head nurse. The brunt of the responsibility and of the work came upon the administrative group, especially upon Miss Tarbox and Miss Blaisdell. Many days, most often over the weekends, when there was usually only one volunteer on duty and the lay personnel vanished from the wards, these nurses left their own work in the office to make beds, serve trays, feed patients, and sweep the floors. The summer of 1945 was the fourth consecutive summer that Miss Tarbox and Miss Blaisdell have had no vacation relief, but carried the double load and at a time of year when the staff is at the lowest point.

It was fortunate that Miss Porrello, the head nurse on the children's ward, was able to relieve the instructor for her vacation in August. For many years we have had several permanent night and evening nurses, but there were withdrawals because of ill health. Efforts to replace them were time-consuming and discouraging. It was found that the nursing load was too heavy. Therefore, two more night nurses were authorized, one for the second and another for the third floor. On the Men's Ward, a very satisfactory staff was eventually established, with an additional night nurse, a full time night orderly and an evening orderly.

We are so grateful to the little group of older nurses and married nurses who came to help us, often at great inconvenience to themselves; two of these nurses left home at 5:30 in the morning. These nurses previously had been on the staff at intervals and so were prepared to make the maximum contribution.

The Anesthesia Department had a most difficult time. For nearly three months in the summer Miss Morrissey, the Chief Nurse Anesthetist, with one assistant comprised the regular staff. Outside nurse anesthetists were employed by the day, and for call at night. In October, an experienced nurse anesthetist joined the regular staff. In November, Dr. Weiss was appointed to the Department to develop its organizational, administrative and instructional program.

The volunteer service has grown, both in number of workers and volume of service. A large group, composed almost entirely of Wellesley College graduates was organized in February and worked very steadily until the early summer. An evening group of business women provided five workers each evening from May 1st to September 1st. There were two working through December. The first group of Red Cross Nurses Aides to be prepared especially for the Infirmary started the course the last of June. There were 20 in the group and they remained constant until the latter part of September. There are four volunteers who always give strength and stability to the volunteer services, for they know the Infirmary well and are ready when there is an acute need. This little group includes Mrs. Larz Anderson, Miss Dorothy Bartol, Mrs. William McCarthy and Mrs. Margaret Goodnow.

During the war years, with the exception of the Private Ward, the Infirmary has depended almost entirely upon the affiliating and post-graduate students for its nursing service. In 1945 the total number of graduate and student nurses who had two months of instruction and experience in the care of the eye, ear, nose and throat conditions was 99. This number was 11 higher than the previous year, and is the result of the growth of the home schools, and the addition of one new affiliating school-that of the McLean Hospital. In addition, the Massachusetts General Hospital School of Nursing sent 27 students, each for fourteen days experience in the Operating Rooms, and it also sent 122 students to the Children's Ward, each for a period ranging from 7 to 14 days. Although the stay of a student was short, they made a great contribution to the nursing service.

From the head nurse group, we lost Miss Lillian Pothier, the very efficient assistant head nurse on the Women's Ward, who resigned in June to enter Tufts College, where she is taking the pre-medical program. We appreciate her coming back to help us over the weekends. After eight years with the Infirmary, Miss Barbard Harris resigned her position of head nurse in the Eye Clinic to accept a position in the Operating Room of the New York Eye and Ear Infirmary.

On the credit side of the ledger have been the stability of the staff in the Nurses' Residence, the remodeling of the third floor in the Infirmary, full remuneration on a cash basis, a newly established and very satisfactory cafeteria, and the addition of certain ward equipment. In many nurses' residences it has been necessary for the nurses and students themselves to look after their own rooms. We have had but one change of matrons, both were efficient, and there has been a minimum turnover among the workers. The interior of the building has been painted, and therefore when the nurses went off duty, they found a clean, freshly painted and orderly place in which to live. Entire payment on the cash basis has been very welcome, especially to the part-time worker. The remodeling of the third floor not only provided much pleasanter wards for the patients, but a treatment room and head nurse stations from which the head nurses can have

command of the ward. We hope that remodeling of the utility room will follow soon. Nothing has been more welcome than the provision of modern bedside tables for every patient.

Early in the war years, the Recovery Ward was closed because of the difficulty of providing the nursing staff. These patients were cared for elsewhere. Later the number of tonsil patients admitted was lowered. The closing of the third floor through August and September for alterations reduced the number of patients.

In spite of all the difficulties, no additional wards or parts of wards were closed during the year 1945 because of the shortages in the Nursing Department. This is to the everlasting credit of all concerned.

Sally Johnson, R.N.
Superintendent of Nurses

REPORT OF DIETARY DEPARTMENT

On January 1, 1945, the Nurses' Cafeteria was set up as a pay cafeteria. Graduate and student nurses, attendants and employees not on a cash salary basis who receive three meals a day were issued food tickets valued at $30.00 for a month. The daily food allowance is $1.00: luncheon 30¢, dinner 50¢. The pay cafeteria system offers a better and more varied selection of food.

On September 1, 1945, Miss Elizabeth Tilton accepted the position of Therapeutic Dietitian, formerly filled by student dietitians doing staff work to complete their training.

Floor plans have been drawn up to modernize the 2nd and 3rd floor kitchens. New tray trucks and dish washing units have been purchased. A new dumb waiter system was installed, permitting the slide to be called and sent to any floor.

We have appreciated the volunteer work done by the American Red Cross Dietitians' Aides. Their help has been invaluable during this critical labor shortage.

The Ladies' Visiting Committee donated fruit for Thanksgiving and refreshments for the Christmas party held in the Nurses' Cafeteria.

The students' dietitian course at the Massachusetts General was divided this year to include four weeks of instruction at the Eye and Ear Infirmary: two weeks of therapeutic work and two weeks of administrative work.

A total of 6,072 special diets were served during the year; a daily average of seventeen (17), including ten (10) general types.

Lynette Bishop
Dietitian

Report of Medical Social Service Department

In presenting the report for 1945, the major events of the past five years in the department are mentioned. Late in 1940 a study of the function and organization of the Social Service Department was begun, following which a definite attempt was made to effect changes which would further the purposes of social work in this setting. In spite of the difficulties of maintaining a stable staff during the war years and added pressures on the medical staff, which made it impractical for some goals to be attempted, it has been possible to accomplish some of the desired results.

The main emphasis has been upon building a strong professional staff which is basic to providing adequate service. Definite educational and experience requirements have been set up for employment.. The staff has been increased to meet the changes in volume and type of problems presented. On the Ear, Nose and Throat Service, where one person formerly handled the whole service, there are now three social workers; two are assigned to the Ear Clinic and Winthrop Foundation and the third exclusively to Nose and Throat and Tumor Clinics. Expansion of work with the hard of hearing under the Winthrop Foundation and an increased number of patients in the Tumor Clinic, made these additions necessary. On the Eye Service a new position has been created due to the increased number of pre-school blind children for whom extensive study and planning have been carried on the past year. On both the Eye, Ear, Nose and Throat Services some pioneer work has been done socially with the seriously handicapped young child, and much still remains to be done in this area.

Although this department has appropriately maintained it's identity, a closer working relationship has been developed with the Massachusetts General Hospital Social Service Department. This is demonstrated through joint case conferences with the professional staffs of both institutions, planned joint programs on the field work supervision of medical social students; joint committees on problems of common interest in professional practice; frequent

conferences between the heads of both departments on matters of hospital policy which concern both departments, to secure uniformity in practice whenever possible.

Greater selection has been exercised in problems accepted for service and careful recording on certain types of social problems has been done to make available material for analysis and study in terms of what the social case work contribution is or should be in view of the particular problems in a specialized hospital of this type. Since no other eye, ear, nose and throat hospital has a department of comparable size to which it has been possible to turn for stimulation, it has been necessary to be constantly conscious of our own functions and evaluate the work in terms of needs and changes as they have appeared, due to changes of emphasis in medical practice.

Teaching of medical social students has been expanded in the past five years and could be further increased but requests for student placement are being rejected each year due to lack of office space, although personnel equipped for an expanded teaching program is now available.

In 1945 the Medical Social Service Department has continued its primary responsibilities with increased activities in some new areas in spite of being without a full staff for a large part of the year. Division of work on the different services shows an increase of over 100 patients on the Ear, Nose and Throat Service, as compared with last year's figures, while the referrals on the Eye Service have decreased slightly.

| | | |
|---|---|---|
| 1. Total number of patients served by Social Service | | 2245 |
| A. Eye Service | | 1399 |
| B. Ear, Nose and Throat Service | | 846 |
| 1. Referred from clinic and wards (Ear) | 324 | |
| 2. Referred from Nose and Throat and Tumor Clinic | 252 | |
| 3. Referred from Winthrop Foundation | 270 | |
| | 846 | |
| II. Total number of patients on follow-up programs | | 2167 |
| A. Glaucoma follow-up program | 1593 | |
| B. Ear follow-up program | 574 | |

Eye Service

The rapid increase in pre-school blind children with retrolental fibroplasia who have presented serious problems in management to their parents has made this group of children one of our major concerns. There are now over 80 children with this ocular abnormality who have been referred to the Social Service Department for consultation and special services. At Dr. Theodore L. Terry's request Miss Ruth Butler was released from her other clinic responsibilities in January 1945, to study the problems of these children and the community resources which might be available to meet their needs. Her study revealed that no existing resource was prepared to offer service which was either varied or extensive enough to meet the numerous problems which the parents brought to the doctor for solution. In view of this Dr. Gabriel Farrell, Director of Perkins Institution and Massachusetts School for the Blind, was consulted for advice. Through interest, stimulated largely by Dr. Terry's concern over the general progress and welfare of the children and his interpretation of their condition, Dr. Farrell offered the resources of Perkins Institution for their use and purposes of study. Following conferences between various members of the personnel of both Perkins Institution and the Infirmary, Perkins Institution offered to arrange an educational program for the mothers of the children to see if some of the common problems of the parents could be met on a group basis. An adivisory committee composed of ophthalmologists, obstetricians, pediatricians, psychiatrists, a psychologist, the Director of the Infirmary, experts in the field of child welfare, nutritionists and social workers, participated in planning the program.

The course was held at Perkins Institution the last two weeks in June 1945. Twenty mothers and seventeen babies were enrolled. Lectures were given by Dr. Terry explaining the medical factors in the condition and interpreting the nature of his research. Other lectures were given covering the physical, emotional and mental development of the pre-school child and in addition the whole project of blindness was explored and discussed. Two teachers of pre-school blind children

from Ohio, and New York, a nutritionist from the Harvard School of Public Health, Miss Butler, medical social worker, and Miss Frances Marshall, social worker at Perkins Institution, were in residence during the entire course and available for consultation by parents on their particular problems.

A nursery school was conducted for the children by Mrs. Mary Louise Wood of the Boston Nursery for Blind Babies and a trained assistant. This produced excellent results as the children made unexpected gains under the direction of trained nursery school teachers and the mothers found it very helpful to observe and put into use, techniques in handling the children, learned from observation of the nursery school in operation. Unfortunately this course could not be attended by the entire group of mothers and many of those with the most serious problems were unable to enroll. However, those who did attend have written warmly of the help they received and it has been obvious from observation that their anxiety has been lessened since the course. In addition to the help which the parents and children received the course has shown our department more clearly the specific needs of the mothers in relation to the blind child's training program and demonstrated at the same time that a program of this sort did not begin to meet all of the problems. The mothers who could not take advantage of the course still need the help of the medical social worker; even the mothers who attended the course need services from her as new problems arise with the growth and development of the child. Her contribution consists of giving the mothers a sense of support during their initial period of adjustment to the reality of the child's blindness and at the same time increasing continuously their sense of security in caring for the child at home by making expert guidance on particular problems available at the appropriate time. In addition to the medical social worker the services of a trained nursery school teacher to visit the home, to work directly with the mother and child on his training program is greatly needed and plans to provide this service for an experimental period are under way at Perkins Institution.

Some of the services described in relation to the children with retrolental fibroplasia are a suitable responsibility of community agencies whose primary concern is child welfare and the blind. Our efforts in regard to the children are an attempt to focus the problems and services in order to place responsibility with the proper agency for developing a permanent adequate program for all pre-school blind children.

Glaucoma

The total number of patients on the follow-up program at the end of 1945 was 1593. There were 208 new patients added to the follow-up during the year and 370 patients were discharged. With a full time follow-up secretary it was possible to pursue a vigorous program to locate patients who had not been to clinic for some time and as a result the discharges were analyzed as follows:

| | |
|---|---|
| Deceased | 97 |
| Referred to local physicians | 100 |
| Discharged from medical treatment | 83 |
| Unable to locate | 64 |
| Discharged to other institutions | 19 |
| Other reasons for discharge | 7 |
| Total | 370 |

We have now had a follow-up secretary without a medical social worker directly assigned to the glaucoma patients for one year. This arrangement is not as satisfactory as when a social worker had over-all responsibility for the glaucoma patients. However, the follow-up has been more adequate than when the social worker was trying to handle both the follow-up program and the social problems. The regular social workers in the clinic have handled 315 glaucoma patients who needed some particular help in relation to their medical treatment, or adjustment to loss of vision, in addition to those receiving routine services from the glaucoma follow-up secretary. The glaucoma patient is definitely not receiving the attention from the social service department that he should have. To handle both the follow-up and social service adequately a full time social worker and full time follow-up secretary are needed.

Ear, Nose and Throat Service

Since the death of Dr. Ruth Guilder in February 1945, there has been a decided change in the social work in the Clinic for the Deaf due to decrease in the work with the hard of hearing child. Emphasis has recently been put on the patients who are to have the fenestration operation but it is doubtful that social service is as helpful in those cases as with the children since so much could be done with them to prevent serious problems in the future by dealing with their handicap early in their lives and helping to plan their educational program realistically in terms of their limitations. There has been no ear follow-up worker since September and that work has had to be neglected. It is encouraging to note that only two children this year have been referred for arrangements for schools for the deaf; 77 children have been reported to the schools for hearing loss; 63 have been referred for lip reading.

The Tumor Clinic referrals to Social Service have continued to be heavy (155) and their problems continue to be difficult in terms of nursing home care. Twelve patients have been referred from the Nose and Throat Clinic with a questionable diagnosis of tubercular laryngitis. A brief study has been done on children being admitted to the hospital for tonsillectomies and recommendations have been submitted to the administration for more individualization in handling these patients in view of the fear and anxieties which surround children facing surgical procedures.

Teaching Responsibilities

Two Master Students from the Simmons College School of Social Work have been here for supervised field work instruction, one of whom was here for an eight week hospital orientation period in the summer also. One student from the North Carolina Commission for the Blind has had field work for a concentrated period on the Eye Service.

The Director has given one lecture to the residents on the Eye Service, one lecture to the Harvard-Perkins Course at Perkins Institution; two lectures at Boston College School of Social Work; monthly lectures to the student nurses and a conference period on the Emotional Component in Medical Care at the Massachusetts General Hospital for Simmons College School of Social Work students have been shared by the Director and other members of the department.

Personnel appointments

Miss Jean Hughes, M.S., Simmons College School of Social Work-July 1945

Miss Mary Jane Foster, A.B., Wellesley College, Glaucoma Follow-up Secretary, September 1945

Publications

Organization of the Social Service Department at the Massachusetts Eye and Ear Infirmary, Volume XIII, #3, Sight Saving Review-E. W. Wilson

Unpublished report of Summer School Project for Pre-School Blind Children held at Perkins Institution 1945-E. W. Wilson

Financial report

Total relief expenditures are somewhat lower than for 1944 but this is mainly due to curtailment in providing hearing aids for children as expenses for glasses have increased, and transportation costs are almost double those of 1944.

We are extremely grateful to the Permanent Charity Fund for an increased allotment in 1944 which helped tremendously in meeting expenses for nursing home care, hearing aids and transportation.

| | | |
|---|---|---|
| Medical relief expenses | | $5180.03 |
| Glasses | $1,702.80 | |
| Prostheses | 209.01 | |
| Nursing and convalescent care | 612.77 | |
| Hearing aids | 2,026.73 | |
| Dentures | 115.00 | |
| Tracheotomy tubes and suction apparatus | 110.00 | |
| Transportation of patients | 320.22 | |
| Ambulance | 75.00 | |
| Splints | 8.50 | |
| Amount refunded by patients | | $2265.69 |
| Amount contributed by other agencies and individuals | | 724.41 |
| | | $2990.10 |

Total expenditures from Social Service Funds
for patients $2189.93

Appreciation is expressed to the Social Service Advisory Committee for their continued interest and support in any suggestions for improvement of the department; to the volunteers who have continued to serve faithfully; and to Dr. Bernard Bandler who has given generously of his time to carry on a seminar with the staff to add to their understanding of some of the human problems with which they are constantly dealing.

Eunice W. Wilson
Director

# REPORT OF THE HOWE LABORATORY

# OF OPHTHALMOLOGY

# 1945

In common with all organizations that have been concerned with the war effort, the Howe Laboratory began, during the past year, to change its activities to those of peace time. Reconversion of a research laboratory entails not only administrative and financial changes but salvaging and publishing such scientific data resulting from the war researches, as might have general usefulness. Further, it entails a realignment of investigations to accord with the fundamental purposes of a university department in peace time.

Throughout the war the full time staff of the Laboratory has remained intact. Even though the research and developmental problems undertaken for the Armed Forces and for the Office of Scientific Research and Development resulted in a considerable departure from ophthalmology proper, it was thought that the common good could best be served by having the staff carry on their studies in a laboratory with which they were familiar. Naturally, those of us vitally interested in the advancement of the ophthalmic science regret this departure from basic research on the eye, but such has been the state of civilization for the past several years that the poisonous effects of war gases and the applied optics of range finders have of necessity had prior ratings over pure research.

A brief summary of the investigations carried on during the war can now be given for the first time.

## WAR GASES

The war gas studies, carried on chiefly by Drs. Kinsey and Grant under the direction of the Office of Scientific Research and Development, had as their original purpose the development of an agent that would prevent the toxic effects of mustard gas on the eye. Owing to the considerable latent period between the time of exposure to

mustard and the development of the clinical reaction, there was reasonable hope that some agent might be found which, applied during this crucial period, would prevent the deleterious effects from appearing.

In this study especial attention was directed at first to the cornea since this portion of the eye is responsible for the incapacitating effects of mustard. It was early established that mustard penetrated the cornea with great rapidity; its distribution in the cornea could be traced by the use of mustard gas made radioactive. Mustard was found to inhibit the normal turgescibility of the corneal stroma but had no effect on the semipermeability of the corneal epithelium.

A highly sensitive method of measuring mustard in tissue was developed in the Howe Laboratory. By this means it was found that mustard gas applied to the cornea reacted with this tissue and completely disappeared within the first few minutes after contact. Like thermal burns, the initial reaction appeared to be irreversible so that preventive treatment seemed to be the only practical form of therapy.

As an attempt to understand the basic toxic processes by a study directly of the eye proved unsuccessful, the need for biochemical information on the fundamental changes induced by mustard on tissue in general became increasingly apparent. Accordingly, an extensive study was made of the mustard reaction in yeast cells which are more amenable to experimental manipulations. The effects of mustard on yeast growth, carbohydrate metabolism, yeast morphology, and mortality were determined and compared with the effects of other known poisons on yeast. The fate of the mustard within the cells was traced by means of radioactive mustard. Much of the mustard was found to be associated with enzymes and with glutathione. Since enzymes are protein in nature, this finding led to an investigation to determine what portion of a protein molecule (casein) binds with the mustard molecule. The lack of growth of rats

whose dietary protein consisted of mustard-treated casein plus selected amino acids was used to indicate what amino acids had been irreversibly bound. The responsible amino acids were found to be methionine and threonine.

Special attention was given to the problem of altering, by oxidation, the mustard in cells after it had once reacted, with the hope that the union of mustard and proteing could be reversed. The only means found was too drastic to be applicable for living tissue. Similarly silver, which had been found to split mustard residue from its combination with the amino acid cysteine, was found to be too toxic to the enzyme system studied (urease).

The toxicity of mustard was found to be due in part to its first hydrolytic product, which we have called Semi-H. A method was devised in this Laboratory of synthesizing Semi-H for the first time and thus permitting a study of its toxic properties independent from mustard.

In conclusion it must be stated that the results of these studies extending over the past three years have not succeeded in developing a means of preventing or reversing the reaction of mustard gas on tissues. But what is most discouraging, the facts which have been brought to light showing the rapidity of reactions and the irreversibility of the mustard-protein bond make it unlikely that any therapeutic agent will ever be found for mustard.

The contracts entered into with the Government for the support of the foregoing investigations terminated on December 31, 1945. The results of the investigations are to be published in a series of 14 papers covering the separate phases of the work.

NAVAL VISUAL TRAINING EQUIPMENT

The development and testing of apparatus used for training in range finding and other gun fire control equipment, has been continuously carried out in the Howe Laboratory since before Pearl Harbor. The work has been under the direction of Dr. Ludvigh and has been carried on through several contracts drawn up between various Navy Bureaus and the Massachusetts Eye and Ear Infirmary.

Attention was first directed to the development of a stereoscopic range finding trainers which employed moving objects as targets; the equipment previously employed using stationary targets was found inadequate in training operators to "track" airplanes in flight. Accordingly,. an apparatus was designed and built, the Stero-trainer Mark 5, utilizing moving pictures of airplanes in various types of attack. By means of controls similar to those used in actual practice, the trainee then kept the plane on the proper point of the reticule insofar as he was able to discern the position of the plane stereoscopically. The results of each run were automatically recorded and scored, permitting an evaluation of the individual's aptitude for range finding and improvement during training. The results of training with this equipment showed a favorable correlation with those under combat conditions. Based on pilot models constructed in the Laboratory, a standard apparatus using these principles was manufactured in mass elsewhere and has served to train hundreds of stereo range finders throughout most of the war.

In response to a request from the Bureau of Ordnance, an investigation was made in 1942-43 of the stadiometric sights for bomber to fighter fire control. It was found that the sights, then in operation, were not suitable for planes approaching with wing aspect other than horizontal. After considerable experimentation using, again, moving pictures of planes in various types of attack, an annulus type of sight

was developed. This proved satisfactory and was adopted by the Navy.

Similarly, other problems which have been worked out in the Laboratory might be described, but space does not permit more than a brief mention of the results. In general, the problems were some of those encountered in changing over from a type of warfare where the targets were relatively stationary to a type where the targets were traveling at high speeds. The Howe Laboratory group carried the assigned problems through the theoretical and experimental stages and then acted in a consultative capacity during the subsequent manufacturing process.

Aside from the studies already mentioned, a few others may be noted briefly. In response to a request from the Bureau of Aeronautics, an exponential return mechanism was developed enabling the conversion of training apparatus using fixed sights to the type using the Draper lead-computing sights. For the Bureau of Ships and especially ingenious device, the so-called CXFV Antenna Simulator, was developed to enable the training of radar operators by the use of simple optical set-ups. In principle this device consisted of substituting light-beam patterns for the radar-emission patterns and a photoelectric cell for the plane. The operating trainee followed the course of the target on a cathode screen just as he would the course of a plane. Other noteworthy contributions were the development of a B.scope plotter and Radar trainer (Mark 9 Spotting) providing training in visual interpretation of radar screens. Both types of apparatus saw service in the Pacific.

The investigations for the Navy are now being gradually terminated. Commander S. Forrest Martin, who had been assigned to the Howe Laboratory for some 56 months, was transferred overseas. Dr. Ludvigh has returned to his former peace-time investigations on a part-time basis. It is hoped that by June 1, 1946, the group will have entirely completed its present studies.

## OTHER STUDIES

An investigation of ultraviolet keratitis which, as noted in previous reports, was begun several years ago, was continued during the past year by Drs. Cogan and Kinsey with the determination of the spectral band responsible for the keratitis. With the data obtained one may make a reasonable inference as to the photosensitive substance in the cornea which gives rise to the reaction. A practical corollary of this investigation was a determination of the relative protection afforded by various types of common glass. Further pertinent studies are currently being made of the transmission of ultraviolet radiation by the ocular media.

Studies on corneal permeability with which the Howe Laboratory has been especially identified during the past several years have been much reduced during the War. However, Dr. Margaret Holt and Dr. Cogan have been able to show the practicability of using electric conductivity (impedence) as an index of ionic permeability for the cornea. The barrier properties of the cornea have been found by this method, as by the chemical method, to depend on the surface membrane, but insofar as rapid changes in permeability may be detected with this method, it provides a valuable adjunct to methods previously employed.

A means has been devised by Drs. Cogan and Kinsey to study regeneration of the endothelium in animal eyes. Experiments are now in progress using this technique to determine some of the nutritional requirements of the endothelium. The aim of these researches is to shed some light on the obscure problem of corneal dystrophies in human beings.

The text on Physiologic Optics by Dr. Ludvigh, which was not quite completed before the War, is now in preparation. A text on the

Neurology of the Ocular Muscles by Dr. Cogan is also in the process of completion and is scheduled for publication during the coming year.

With partial reconversion to peace-time research, studies on intraocular fluid dynamics are again in contemplation. Dr. Kinsey has already devised a new method of the micro determination of urea for use in studying the partition of this substance between blood and aqueous humor. Studies have also been started to determine the specificity of ascorbic acid and related compounds in relation to intraocular fluid formation.

Dr. Grant has begun a comprehensive study on toxicology of the eye especially as it related to industrial substances. Among the potentially hazardous compounds which have been investigated so far are trichlorethylene, propylene oxide, benzoquinone, hydrogen sulphide, butyl acetate, ammonia, sulphur dioxide, and methyl chloride. A further biochemical study is currently being carried out on the toxic properties of methyl alcohol and methyl chloride. These latter have necessitated the development of micromethods for the determination of methyl alcohol, formaldehyde, and formic acid in the blood. Finally, observations have been made on the opticokinetic responses in animals receiving the antiepileptic agent "Triodone." This latter was investigated because of certain visual disturbances occurring in patients receiving this drug.

During the past year Dr. Grant also prepared a timely review article for the Archives of Ophthalmology on the ocular complications of malaria.

Dr. Ludvigh has begun, on a part-time basis, a further investigation of those subjects which were interrupted by the War: light difference perception in ambylopia ex anopsia, aimed toward providing a means of differentiating persons with strabismus who may be benefited

by orthoptic training from those who will not be benefited; visual acuity based on color perception; and visual perception of movement aimed toward determination of the highest time derivative of space which the human eye can perceive.

Drs. Ludvigh and Kinsey have investigated the effects on vision of exposure to radiant energy in the wave band 320-400 mu in human beings. No deleterious effects were demonstrated using the criteria of light difference perception and critical flicker frequency.

Dr. Albert Lemoine, Jr. was appointed during the past year a Research Fellow in Ophthalmology. This one year appointment made conjointly by the Massachusetts Eye and Ear Infirmary and the Howe Laboratory is intended to further expedite the contacts between research, clinical ophthalmology, and teaching of ophthalmology as well as to afford specialized postgraduate training for the individual.

The entire Howe Laboratory group has continued to make an aggressive effort to co-operate with other research and clinical departments. Dr. Kinsey has continued actively as biochemical consultant for research work being carried out by the Pathology department of the Massachusetts Eye and Ear Infirmary. He has also continued work started a year ago as consultant for the Insect Control Program of the National Academy of Sciences in Washington. Dr. Grant has developed an instrument to be used in conjunction with the Thyroid Service at the Massachusetts General Hospital for the measurement of orbital resiliency. Dr. Cogan has made a clinical study of certain cathode ray burns of the eyes in conjunction with the Radiology department of the Massachusetts General Hospital.

## LABORATORY SUPPORTS

The rising cost of services, wages, and materials reduces, in effect, the budget of a department such as the Howe Laboratory which has had a relatively fixed capital. Unless some outside source of income were forthcoming, this could only mean a shrinkage of the Laboratory in comparison with its prewar status. Such a shrinkage would appear most undesirable in view of the increasingly important function which the Laboratory has served since its inception. Accordingly, the hope was expressed at the conclusion of last year's Report that, with the withdrawal of government aid, a means might be found to continue the full activities of the Laboratory. It is, therefore, a great pleasure to acknowledge that at the end of the year, as this report was being prepared, the American Optical Co. graciously offered to give assistance over a period of three years for research in physiologic optics, and the Markle Foundation offered to provide a grant-in-aid for two years in the proposed study of intraocular fluid formation. Only by assistance from such far seeing and generous agencies can the Howe Laboratory hope to maintain and expand its facilities for carrying our basic research in the all-important field of ophthalmology.

David G. Cogan
Director

REPORT OF THE

OCCUPATIONAL THERAPY DEPARTMENT

The number of Occupational Therapy treatments for 1945 has shown a slight increase over the past year but does not, as yet, represent a maximum possible case load. The department has been using a new form for prescription cards and for the first time in its' history has a record sheet in the patient's permanent record. We feel that this will help in time to come if there should be a readmission, and that by these record sheets the doctors will be better able to judge the value of such treatments for their patients.

Our ship equipment has been added to from time to time, so that we now have an adequate wood-working bench with sufficient tools to make small wood projects possible. We have had several thoughtful gifts of money which were used to purchase an additional bookcase and books for the Patients' Library. There has also been a gift of money for a Victrola to be used in the Nursery. Our department has secured the loan of a talking book machine and records, for such patients as may desire to use it while in the hospital.

We have been fortunate in having fourteen students from the Boston School of Occupational Therapy affiliate with us this year as a part of their field training. We have had several very faithful volunteers to whom we are very grateful for the time they gave so generously.

With the co-operation of the Dietary Department and the Social Service Department, we have continued marking the holidays by some small favor or decoration, and, at Christmas, gifts were purchased to fill the Nursery children's stockings.

Anne M. Olsen
(Mrs. G. Gordon Olsen, O.T.R.)
Director Occupational Therapy

| | 1945 | 1944 |
|---|---|---|
| Number of Patients Prescribed | 294 | 289 |
| Number of Occupational Therapy Treatments | 2,617 | 1,881 |
| Nursery | 391 | 394 |

| | 1945 | 1944 |
|---|---|---|
| Books Purchased | 41 | 54 |
| Books Donated | 24 | |
| Books Rebound | 7 | 5 |
| Books Lost | 10 | 5 |
| Magazines | 17 | 17 |
| Students | 14 | 7 |
| Therapists | 1.5 | 1.5 |

REPORT OF THE LUCIEN HOWE LIBRARY

OF OPHTHALMOLOGY

The primary functions of supplying and checking book and journal references for the staff of the Howe Laboratory and Eye and Ear Infirmary have been carried on for another year. Doctors, research workers, social workers, student nurses, and occasionally laymen have consulted and borrowed library material.

More persons have availed themselves of the interlibrary loan service and the number of books and journals borrowed from other institutions was more than double that of last year and greater than in the peak year of 1943. Most of the journals borrowed were either non-ophthalmologic or of foreign publication. Many of the articles which were not available in journal form were obtained by means of microfilm from the Army Medical Library at postage cost. A microfilm reader has been borrowed from Widener Library;and further use may warrant purchase of the Library's own machine.

It has been gratifying to answer an increased number of requests, by mail and in person, for bibliographic assistance. In addition to completing references for papers about to be published, several bibliographies have been compiled and the material assembled for consultation. A file of duplicate copies of these lists of references has been started and in one instance a bibliography (congenital cataract following German measles in the mother) was eventually used by six different men.

The minor change in the shelf-list numbering, adding of date to the shelf-list card and the assigning of additional subject analytic cards for each book already in the collection is being continued.

The journals received continue to be the domestic, English, and Latin-America publications. Back numbers of Scandinavian, French

The statistical report is appended.

| | | | | | |
|---|---|---|---|---|---|
| ATTENDANCE | 1944 | 1945 | | | |
| | 4419 | 4456 | +37 | | |
| | Peak Year | 1938 | 8,027 | | |
| CIRCULATION | Pamphlets | | 20 | | |
| | Books | | 370 | | |
| | Bound journals | | 286 | | |
| | Unbound journals | | 114 | 1944 | |
| | Total | | 790 | 637 | +153 |
| | Peak year 1941 | | 1295 | | |

| | | | |
|---|---|---|---|
| INTERLIBRARY LOANS | | | |
| Howe Library borrowed from: | | | |
| Harvard Medical and departmental libraries | 288 | | |
| Treadwell, Boston Medical Library, M.I.T., Army Medical Library and others | 394 | | |
| Total | 682 | | |
| Howe Library loaned to Harvard Libraries | 17 | | |
| Howe Library loaned to non-Harvard institutions | 19 | | |
| Loans for Treadwell from other institutions delivered via Harvard Messenger | 101 | 1944 | |
| | 829 | 393 | +436 |

Included in the above figures were 11 photostats and 24 microfilms. Most of the former were secured from the College of the Physicians of Philadelphia Library and the New York Academy of Medicine, and the latter from the Army Medical Library.

| | |
|---|---|
| ACCESSIONS | |
| Volumes purchased | 31 |
| Volumes added by binding | 14 |
| Gift and exchange | 18 |
| Transferred from Harvard Medical School | 2 |
| Volumes completed (unbound) | 2 |
| Total | 67 |

| | | | |
|---|---|---|---|
| TOTAL BOOK STOCK | 1944 | 1945 | |
| Books | 1062 | 1107 | +45 |
| Bound journals | 2009 | 2025 | +16 |
| Pamphlets | 2596 | 2600 | + 4 |
| Complete unbound journals | | 2 | + 2 |
| Total | 5667 | 5734 | + 67 |

and Italian journals are beginning to be supplied by publishers and dealers but when and how the majority of foreign periodicals will be delivered has not yet been determined by the Joint Committee on Importations. At the time of writing, 14 foreign journals out of the 45 total subscriptions (purchases and gifts) are not being received. A subscription to the new Quarterly Review of Ophthalmology has been added. Starting with 1945 unbound files of the Journal of the American Medical Association, Science and Nutrition Reviews of the current five years will be shelved rather than distributed as duplicates to other libraries.

Following requests from abroad for American journals, the Library has offered its services as a means of distributing extra copies of the Archives of Ophthalmology and American Journal of Ophthalmology to doctors on the Continent and elsewhere. Addresses of foreign ophthalmologists and institutions whose purchase of American journals has been halted by currency restrictions will be obtained and assigned to Americans willing to give their journals for distribution abroad.

The gift of a pair of old spectacles and the deposit of a small magnet (1889) by the Infirmary were added to the Library museum.

The pamphlet collection, which is in fact a reprint collection, has had but few recent additions besides Howe Laboratory staff publications. It is planned to segregate the pamphlets from the reprints, to enlarge the latter collection and to make it more accessible and practical.

With the gradual return of veterans, the prospect of enlarged post-war student courses and resumed peace-time research in the laboratories, the Library will, no doubt, serve an increasingly active and serviceable function. The increased use may warrant the reinstating of student assistance so that the Library will again be open several evenings a week.

CATALOG

| | |
|---|---|
| New titles and editions classified and cataloged | 39 |
| Volumes classified, cataloged and/ or prepared for shelves including journals, excluding above | 28 |
| Previously accessioned volumes checked for changes in shelf-list number and additional subject cards | 68 |
| Total | 135 |

Jeanette Loessl
Librarian

Table of Diseases Compiled from Records (Continued) 1945 to 1946

| | House | Outpatient |
|---|---|---|
| Section XV11 (Continued) | | |
| Diseases of the Ear: | | |
| Q. General | 12 | 0 |
| R. Auricle | 26 | 0 |
| S. External Auditory Canal | 12 | 4 |
| T. Eustachian Tube | 0 | 0 |
| V. Middle Ear and Mastoid | 430 | 9 |
| W. Internal Ear | 10 | 0 |
| Section XV111 | | |
| Diseases of Nose and Accessory Sinuses | 853 | 6 |
| Section X1X | | |
| Diseases of the Mouth, Lips, Cheeks, Pharynx, Tonsils, etc. | 1544 | 10 |
| Section XX | | |
| Diseases of Jaw, Teeth and Gums | 28 | 0 |
| Section XX1 | | |
| Diseases of the Tongue | 2 | 0 |
| Section XX11 | | |
| Diseases of the Esophagus | 181 | 1 |
| Section XX111 | | |
| Diseases of the Stomach | 2 | 0 |
| Section XX1V | | |
| Diseases of the Intestines | 1 | 0 |
| Section XXV | | |
| Diseases of the Liver and Biliary Duct | 0 | 0 |
| Section XXV1 | | |
| Diseases of the Pancreas | 0 | 0 |
| Section XXV11 | | |
| Diseases of the Abdomen and Peritoneum | 1 | 0 |
| Section XXV111 | | |
| Diseases of the Anus and Rectum | 0 | 0 |
| Section XX1X | | |
| Diseases of the Larynx | 66 | 0 |
| Section XXX | | |
| Diseases of the Trachea and Bronchi | 57 | 0 |
| Section XXX1 | | |
| Diseases of the Lungs | 3 | 0 |
| Section XXX11 | | |
| Diseases of the Pleura and Mediastinum | 0 | 0 |
| Section XXX111 | | |
| Diseases of the Kidney and Ureter | 3 | 0 |
| Section XXX1V | | |
| Diseases of the Bladder | 1 | 0 |
| Section XXXV | | |
| Diseases of the Urethra | 0 | 0 |
| Section XXXV1 | | |
| Diseases of the Male Genital Organs | 1 | 0 |
| Section XXXV11 | | |
| Diseases of the Female Genital Organs | 0 | 0 |
| Section XXXV111 | | |
| Diseases Peculiar to Pregnancy | 0 | 0 |
| Section XXX1X | | |
| Diseases of the Breast, Male and Female | 1 | 0 |
| Section XL | | |
| Allergy | 8 | 0 |
| Section XL1 | | |
| Abnormal Urine | 1 | 0 |
| Section XL11 | | |
| 111-Defined Diagnoses or Unclassified Diseases | 48 | 3 |
| Totals | 7759 | 2104 |

# TABLE OF DISEASES COMPILED FROM RECORDS
## EYE AND EAR INFIRMARY
## JANUARY 1, 1945 to JANUARY 1, 1946

| | House | OPD |
|---|---|---|
| Section 1 | | |
| Specific Infectious Diseases | 97 | 4 |
| Section 11 | | |
| Diseases Due to Animal Parasites | 5 | 0 |
| Section 111 | | |
| Diseases of Metabolism and Deficiency | 41 | 2 |
| Section 1V | | |
| Diseases Peculiar to Infancy | 26 | 2 |
| Section V | | |
| Diseases Due to Physical Agents | 4 | 0 |
| Section V1 | | |
| Diseases Due to Poisons | 1 | 0 |
| Section V11 | | |
| Tumors Benign and Malignant | 589 | 60 |
| Section V111 | | |
| Congenital Malformations | 80 | 0 |
| Section 1X | | |
| Injuries | 50 | 1 |
| Section X | | |
| Diseases of the Skin | 35 | 1 |
| Section X1 | | |
| Diseases of the Circulatory System | 26 | 0 |
| Section X11 | | |
| Diseases of the Lymphatic System | 6 | 1 |
| Section X111 | | |
| Diseases of the Blood Forming Organs | 1 | 1 |
| Section X1V | | |
| Diseases of the Ductless Glands | 6 | 0 |
| Section XV | | |
| Diseases of the Nervous System | 60 | 3 |
| Section XV1 | | |
| Diseases of the Bones, Joints, Muscles, Tendons, and Fascia | 25 | 0 |
| Section XV11 | | |
| Diseases and Injuries of the Eye and Ear | | |
| Diseases of the Eye: | | |
| A. General | 559 | 596 |
| B. Lids | 88 | 149 |
| C. Lacrimal Apparatus | 89 | 80 |
| D. Conjunctiva | 93 | 218 |
| E. Cornea | 257 | 727 |
| F. Anterior Chamber | 15 | 2 |
| G. Sclera | 15 | 2 |
| H. Lens | 1268 | 89 |
| J. Uveal Tract | 58 | 6 |
| 1. Iris | 147 | 0 |
| 2. Ciliary Body | 17 | 0 |
| 3. Choroid | 27 | 0 |
| K. Retina | 165 | 59 |
| L. Vitreous | 10 | 7 |
| M. Optic Nerve | 23 | 5 |
| N. Eyeball | 184 | 6 |
| O. Orbit | 37 | 2 |
| P. Disturbances of Motion | 547 | 42 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Summary of Hospital Deficit

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| | Income | Expense | Surplus and Deficit |
|---|---|---|---|
| Private Ward | 107,296.74 | 102,436.17 | 4,860.57 |
| Public Ward | 170,026.00 | 281,687.16 | 111,661.16 |
| Total In-Patient | 277,322.74 | 384,123.33 | 106,800.59 |
| Out-Patient Department | 121,557.86 | 168,118.22 | 46,560.36 |
| Total Patient Income and Expense | 398,880.60 | 552,241.55 | 153,360.95 |
| Non-Patient Income | 9,950.44 | | 9,950.44 |
| Non-Patient Expenses | | 25,505.32 | 25,505.32 |
| Total Hospital | 408,831.04 | 577,746.87 | 168,915.83 |

Summary of Hospital Deficit

For the Year Ended December 31, 1944

| | Income | Expense | Surplus and Deficit |
|---|---|---|---|
| Private Ward | 103,144.30 | 97,897.05 | 5,247.25 |
| Public Ward | 171,061.15 | 274,281.05 | 103,219.90 |
| Total In-Patient | 274,205.45 | 372,178.10 | 97,972.65 |
| Out-Patient Department | 119,163.63 | 163,949.40 | 44,785.77 |
| Total Patient Income and Expense | 393,369.08 | 536,127.50 | 142,758.42 |
| Non-Patient Income | 1,292.79 | | 1,292.79 |
| Non-Patient Expense | | | |
| Total Hospital | 394,661.87 | 536,127.50 | 141,465.63 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Current Expense

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| | DIRECT EXPENSES | | |
|---|---|---|---|
| | Salaries and Wages | Other Expenses | Total Expenses |
| ADMINISTRATIVE AND GENERAL | 47,546.37 | 14,562.86 | 62,109.23 |
| HOUSEHOLD AND PROPERTY | | | |
| Housekeeping | 23,004.14 | 6,391.75 | 29,395.89 |
| Laundry and Linen | 13,522.71 | 1,157.19 | 14,679.90 |
| Plant Operation | 8,517.80 | 19,528.17 | 28,045.97 |
| Plant Maintenance | 6,951.77 | 5,869.45 | 12,821.22 |
| Nurses Living Quarters | 8,305.78 | 918.03 | 9,223.81 |
| Other Personnel Quarters | 1,145.36 | 89.23 | 1,234.59 |
| Dietary Department | 30,566.75 | 7,841.01) | 78,616.22 |
| Foods | | 40,208.46) | |
| GENERAL PROFESSIONAL CARE | | | |
| Medical-Surgical Care | 14,113.00 | 10,601.31 | 24,714.31 |
| Nursing Care | 65,147.99 | 134.16 | 65,282.31 |
| School of Nursing | 4,953.90 | 443.69 | 5,397.59 |
| Pharmacy | | 18,360.67 | 18,360.67 |
| Social Service | 18,055.98 | 1,038.00 | 19,093.98 |
| Occupational Therapy | 2,789.35 | 156,00 | 2,945.55 |
| Medical Records and Library | 11,538.60 | 941.99 | 12,480.59 |
| SPECIAL PROFESSIONAL CARE | | | |
| Ward Operating Rooms | 9,610.35 | 8,721.37 | 18,331.72 |
| Private Operating Rooms | 3,560.04 | 2,393.29 | 5,953.33 |
| Anesthesia | 5,050.41 | 90.58 | 5,140.99 |
| X-Ray | 8,080.93 | 3,410.82 | 11,491.75 |
| Laboratory | 9,530.39 | 6,416.76 | 15,947.15 |
| Blood Bank | | 1,008.00 | 1,008.00 |
| Optical | 8,811.07 | 18,287.29 | 27,098.36 |
| Refraction | 8,857.63 | | 8,857.63 |
| OUT-PATIENT DEPARTMENT | 35,117.53 | 44,998.36 | 80,115.89 |
| INVENTORY ADJUSTMENT | | 253.96 | 253.96 |
| COST OF GOODS SOLD | | 51.28 | 51.28 |
| OTHER EXPENSE: | | | |
| Extra-Ordinary Expenses | | 19,095.14 | 19,095.14 |
| TOTAL HOSPITAL EXPENSE | 344,777.85 | 232,969.02 | 577,746.87 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Expenses - Year Ending December 31, 1945

Apportionment of Expenses as Recommended by the Boston Hospital Council

| | Total |
|---|---|
| Administrative and General | 12,895.86 |
| Housekeeping | 16,572.61 |
| Laundry and Linen | 17,282.83 |
| Plant Operation | 9,867.32 |
| Plant Maintenance | 5,279.15 |
| Dietary and Foods | 70,130.20 |
| Medical-Surgical Care | 29,205.25 |
| Residents | 14,038.57 |
| Nursing Administration | 8,257.55 |
| In-Patient Graduate Nurses | 50,083.13 |
| Student Nurses | 18,293.19 |
| In-Patient Attendants and Orderlies | 22,056.63 |
| Maintenance of: | |
| In-Patient Graduate Nurses | 2,175.63 |
| In-Patient Attendants and Orderlies | 4,351.26 |
| School of Nursing | 6,935.57 |
| Pharmacy | 17,783.59 |
| Social Service | 22,604.69 |
| Occupational Therapy | 4,511.33 |
| Medical Records and Library | 13,507.30 |
| Operating Room | 37,971.95 |
| Anesthesia | 9,707.59 |
| X-Ray | 15,494.74 |
| Laboratory | 26,155.73 |
| Blood Bank | 1,008.00 |
| Optical | 27,098.36 |
| Refraction | 8,857.63 |
| Out-Patient Department | 80,115.89 |
| Total Comparable Expenses | 552,241.55 |
| Other Expenses: | |
| Pay Cafeteria | 6,104.94 |
| Extra-Ordinary Expenses | 19,095.14 |
| Other Non-Patient Expenses | 305.24 |
| TOTAL HOSPITAL EXPENSE | 577,746.87 |
| Total Salaries | 344,777.85 |
| Total Supplies and Expenses | 232,969.02 |
| TOTAL HOSPITAL EXPENSE | 577,746.87 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Expenses - Year Ending December 31, 1945

Apportionment of Expenses as Recommended by the Boston Hospital Council

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Expenses - Year Ending December 31, 1945

Apportionment of Expenses as Recommended by the Boston Hospital Council

| In-Patient Total | Private Patients | Ward Patients | Out-Patient Department |
|---|---|---|---|
| 10,722.07 | 2,770.21 | 7,951.86 | 2,173.79 |
| 16,572.61 | 3,686.47 | 12,886.14 | |
| 17,282.83 | 4,540.55 | 12,742.28 | |
| 9,867.32 | 2,195.01 | 7,672.31 | |
| 5,279.15 | 1,174.32 | 4,104.83 | |
| 70,130.20 | 22,051.96 | 48,078.24 | |
| 22,390.70 | 6,814.55 | 15,576.15 | 6,814.55 |
| 7,915.65 | 75.23 | 7,840.42 | 6,122.92 |
| 7,851.45 | 2,687.28 | 5,164.17 | 406.10 |
| 50,083.13 | 20,033.25 | 30,049.88 | |
| 13,148.23 | | 13,148.23 | 5,144.96 |
| 22,056.63 | 6,487.30 | 15,569.33 | |
| 2,175.63 | 725.20 | 1,450.43 | |
| 4,351.26 | 725.22 | 3,626.04 | |
| 4,984.94 | | 4,984.94 | 1,950.63 |
| 17,499.58 | 559.93 | 16,939.65 | 284.01 |
| 3,390.70 | | 3,390.70 | 19,213.99 |
| 4,511.33 | | 4,511.33 | |
| 13,507.30 | 4,726.74 | 8,780.56 | |
| 37,971.95 | 9,211.40 | 28,760.55 | |
| 9,707.59 | 2,754.43 | 6,953.16 | |
| 5,581.21 | 1,563.42 | 4,017.79 | 9,913.53 |
| 26,134.02 | 9,380.85 | 16,753.02 | 21.86 |
| 1,008.00 | 272.85 | 735.15 | |
| | | | 27,098.36 |
| | | | 8,857.63 |
| | | | 80,115.89 |
| 384,123.33 | 102,436.17 | 281,687.16 | 168,118.22 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Income - Year Ending December 31, 1945

Distribution of Income as Recommended by the Boston Hospital Council

| | Total |
|---|---|
| Earnings from Service to Patients | |
| Board and Routine: | |
| Board of Patients | 213,535.44 |
| Board of Guests | 39.00 |
| Out-Patient Service Fees | 42,151.92 |
| Emergency Service Fees | 4,721.15 |
| Total Board and Routine Earnings | 260,447.51 |
| Special Services: | |
| Operating Rooms | 35,234.56 |
| Anesthesia | 1,635.00 |
| X-Ray | 29,855.59 |
| Laboratories | 19,857.97 |
| Blood Bank | 979.00 |
| Optical | 51,190.23 |
| Refraction | 9,525.75 |
| Clinical Records | 1,243.60 |
| Orthoptic | 1,903.10 |
| Total Special Service Earnings | 151,424.80 |
| Other Services: | |
| Pharmacy | 37,874.05 |
| Miscellaneous Patient Income | 2,211.87 |
| Total Other Service Earnings | 40,085.92 |
| Total Earnings from Service to Patients | 451,958.23 |
| Less: Deductions from Earnings: | |
| Allowances to Patients | 50,278.64 |
| Net Provision for Doubtful Accounts | 2,798.99 |
| Total Deductions from Earnings | 53,077.63 |
| Total Net Earnings from Patients | 398,880.60 |
| Other Income: | |
| Pay Cafeteria | 4,430.49 |
| Miscellaneous Non-Patient | 5,519.44 |
| Total Other Income | 9,950.44 |
| TOTAL HOSPITAL INCOME | 408,831.04 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Statement of Income - Year Ending December 31, 1945

Distribution of Income as Recommended by the Boston Hospital Council

| Total In-Patient | Private | Ward | Out-Patient | Private Ambulatory |
|---|---|---|---|---|
| 213,535.44 | 72,651.40 | 140,884.04 | | |
| 39.00 | | 39.00 | | |
| | | | 42,151.92 | |
| | | | 4,721.15 | |
| 213,574.44 | 72,651.40 | 140,923.04 | 46,873.07 | |
| 34,789.80 | 11,772.00 | 23,017.80 | | 444.76 |
| 1,595.00 | 1,595.00 | | | 40.00 |
| 11,677.08 | 3,471.54 | 8,205.54 | 15,302.95 | 2,875.56 |
| 17,325.77 | 6,547.10 | 10,778.67 | 14.50 | 2,517.70 |
| 979.00 | 265.00 | 714.00 | | |
| 415.52 | 194.50 | 221.02 | 50,747.71 | 27.00 |
| 25.00 | | 25.00 | 9,425.75 | 75.00 |
| 1,009.05 | | 1,009.05 | 234.55 | |
| | | | 1,903.10 | |
| 67,816.22 | 23,845.14 | 43,971.08 | 77,628.56 | 5,980.02 |
| 19,361.08 | 4,593.43 | 14,767.65 | 18,325.92 | 187.05 |
| 2,193.62 | 39.70 | 2,153.92 | 18.25 | |
| 21,554.70 | 4,633.13 | 16,921.57 | 18,344.17 | 187.05 |
| 302,945.36 | 101,129.67 | 201,815.69 | 142,845.80 | 6,167.07 |
| 28,990.70 | | 28,990.70 | 21,287.94 | |
| 2,798.99 | | 2,798.99 | | |
| 31,789.69 | | 31,789.69 | | |
| 271,155.67 | 101,129.67 | 170,026.00 | 121,557.86 | 6,167.07 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Income and Cost Summary - Patient Services

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| | IN - All In-Patients |
|---|---|
| Income from Services to Patients | |
| Board and Routine Service Earnings | 213,574.44 |
| Special Service Earnings | 73,796.24 |
| Other Service Earnings | 21,741.75 |
| Total Earnings from Patients | 309,112.43 |
| Deductions from Earnings: | |
| Allowances to Patients | 28,990.70 |
| Net Provision for Doubtful Accounts | 2,798.99 |
| Total Deductions from Earnings | 31,789.69 |
| Net Income from Services to Patients | 277,322.74 |
| Cost of Services to Patients | |
| Board and Routine Services | 276,645.92 |
| Special Services | 90,176.65 |
| Other Services | 17,300.76 |
| Combined Service Costs | 384,123.33 |
| PROFIT OR LOSS | 106,800.59 |
| Average Unit Income | |
| Board and Routine Service Earnings | 4.42 |
| Special Service Earnings | 1.53 |
| Other Service Earnings | .45 |
| Total Earnings from Patients | 6.40 |
| Deductions from Earnings: | |
| Allowances to Patients | .60 |
| Net Provision for Doubtful Accounts | .06 |
| Total Deductions from Earnings | .66 |
| Net Income from Services to Patients | 5.74 |
| Average Unit Costs | |
| Board and Routine | 5.72 |
| Special Services | 1.87 |
| Other Services | .36 |
| Combined Service Costs | 7.95 |
| AVERAGE PROFIT OR LOSS | 2.21 |

| | |
|---|---|
| Unit of Service - Patient Days Care | 48,338 |
| Out-Patient Visits | |

MASSACHUSETTS EYE AND EAR INFIRMARY

Income and Cost Summary - Patient Services

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| - PATIENT SERVICES | | AMBULATORY SERVICES |
|---|---|---|
| Private | Ward | Out-Patient |
| 72,651.40 | 140,923.04 | 46,873.07 |
| 29,825.16 | 43,971.08 | 77,628.56 |
| 4,820.18 | 16,921.57 | 18,344.17 |
| 107,296.74 | 201,815.69 | 142,845.80 |
| | 28,990.70 | 21,287.94 |
| | 2,798.99 | |
| | 31,789.69 | 21,287.94 |
| 107,296.74 | 170,026.00 | 121,557.86 |
| 74,357.40 | 202,288.52 | 117,361.35 |
| 23,847.23 | 66,329.42 | 45,891.38 |
| 4,231.54 | 13,069.22 | 4,865.49 |
| 102,436.17 | 281,687.16 | 168,118.22 |
| 4,860.57 | 111,661.16 | 46,560.36 |
| 5.40 | 4.04 | .69 |
| 2.22 | 1.26 | 1.14 |
| .36 | .48 | .27 |
| 7.98 | 5.78 | 2.10 |
| | .83 | .31 |
| | .08 | - |
| | .91 | .31 |
| 7.98 | 4.87 | 1.79 |
| 5.53 | 5.80 | 1.73 |
| 1.77 | 1.90 | .68 |
| .32 | .37 | .07 |
| 7.62 | 8.07 | 2.48 |
| .36 | 3.20 | .69 |
| 13,449 | 34,889 | 67,932 |

MASSACHUSETTS EYE AND EAR INFIRMARY

Income and Cost Summary - Special Services

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| | Total | |
|---|---|---|
| **OPERATING ROOM** | | |
| Number of Operations | 7,171 | |
| Income | 35,234.56 | |
| Expense | 47,130.28 | |
| Profit or Loss | 11,895.72 | |
| Average Income Per Operation | 4.91 | |
| Average Cost Per Operation | 6.57 | |
| Average Profit or Loss Per Operation | 1.66 | |
| **X-RAY** | | |
| Number of Films Used | 13,002 | |
| Income | 29,855.59 | |
| Expense | 15,494.74 | |
| Profit or Loss | 14,360.85 | |
| Average Income Per Film | 2.30 | |
| Average Cost Per Film | 1.19 | |
| Average Profit or Loss Per Film | 1.11 | |
| **LABORATORY** | | |
| Number of Examinations(not available) | | |
| Income | 19,857.97 | |
| Expense | 26,365.33 | |
| Profit or Loss | 6,507.36 | |
| Average Income Per Examination ) | | |
| Average Cost Per Examination ) | | Expenses distributed in |
| Average Profit or Loss Per Examination ) | | accordance with the income ratios. |
| **BLOOD BANK** | | |
| Number of Transfusions(not available) | | |
| Income | 979.00 | |
| Expense | 1,008.00 | |
| Profit or Loss | 29.00 | |
| Average Income Per Transfusion ) | | |
| Average Cost Per Transfusion ) | | $29 deficit is due to refunds |
| Average Profit or Loss Per Transfusion ) | | in 1945 for blood bank replacements. Income for same had been credited during 1944. |
| **REFRACTION** | | |
| Number of Treatments | 10,046 | |
| Income | 9,525.75 | |
| Expense | 8,857.63 | |
| Profit or Loss | 668.12 | |
| Average Income Per Treatment | .95 | |
| Average Cost Per Treatment | .88 | |
| Average Profit or Loss Per Treatment | .07 | |

MASSACHUSETTS EYE AND EAR INFIRMARY

Income and Cost Summary - Special Services

For the Year Ended December 31, 1945

Distribution as Recommended by the Boston Hospital Council

| Private | Ward | Out-Patient |
|---|---|---|
| 1,621 | 4,092 | 1,458 |
| 12,216.76 | 23,017.80 | |
| 9,685.22 | 37,445.06 | |
| 2,531.54 | 14,427.26 | |
| 7.54 | 5.63 | |
| 5.97 | 9.15 | |
| 1.57 | 3.52 | |
| | | |
| 1,312 | 3,371 | 8,319 |
| 6,347.10 | 8,205.54 | 15,302.95 |
| 1,563.42 | 4,017.79 | 9,913.53 |
| 4,783.68 | 4,187.75 | 5,389.42 |
| 4.84 | 2.43 | 1.84 |
| 1.19 | 1.19 | 1.19 |
| 3.65 | 1.24 | .65 |
| | | |
| 9,064.80 | 10,778.67 | 14.50 |
| 9,456.08 | 16,887.39 | 21.86 |
| 391.28 | 6,108.72 | 7.36 |

Expenses distributed in accordance with the income ratios.

| | |
|---|---|
| 265.00 | 714.00 |
| 272.25 | 735.15 |
| 7.25 | 21.15 |

$29 deficit is due to refunds in 1945 for blood bank replacements. Income for same had been credited during 1944.

| |
|---|
| 10,046 |
| 9,525.75 |
| 8,857.63 |
| 668.12 |
| .95 |
| .88 |
| .07 |

U. HOLZER
BINDER
BOSTON, MASS.